Lone Tree City Council Agenda
Tuesday, January 17, 2017

Meeting Location: City Council Meeting Room, Lone Tree Civic Center, 8527 Lone Tree Parkway.
Meeting Procedures: The Lone Tree City Council and staff will meet in a public Study Session at 4:30pm. At 6:00pm and following the meeting, if necessary, the Council Meeting will adjourn and convene in Executive Session. If an Executive Session is not necessary, Council will recess for dinner. The Regular Session will be convened at 7:00pm. Study Sessions and Regular Sessions are open to the public, Executive Sessions are not. Study Sessions are informational sessions and no action is taken. Comments from the public are welcome during the Regular Session at these occasions: 1. Public Comment (brief comments on items not on the agenda or scheduled for public hearing or public input) 2. Public Hearings. To arrange accommodations in accordance with the Americans with Disabilities Act at public meetings, please contact the City Clerk at least 48 hours prior to the meeting.

4:30pm Study Session Agenda

1. 2016 Citizen Survey Presentation
2. Approval of Yosemite "Community Center" Remodeling Contract
3. Wireless Communication Briefing

6:00pm Executive Session Agenda

1. Roll Call
2. Executive Session

7:00pm Regular Session Agenda

3. Opening of Regular Meeting/Pledge of Allegiance
4. Amendments to the Agenda and Adoption of the Agenda
5. Conflict of Interest Inquiry
6. Public Comment
7. Announcements
8. Consent Agenda
   a. Minutes of the January 3, 2017 Regular Meeting
   b. Claims for the Period of December 27, 2016 to January 9, 2017
   c. Treasurer's Report for November 2016
9. Administrative Matters
   a. **RESOLUTION 17-02, REGARDING THE PROPOSED ANNEXATION OF REAL PROPERTY TO THE CITY OF LONE TREE**
   b. Approval of Yosemite "Community Center" Remodeling Contract
10. Community Development
    a. **Public Hearing: Ordinance 17-01, AN ORDINANCE AMENDING CHAPTER 11 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE AND AMEND THE DOUGLAS COUNTY ROADWAY AND DESIGN STANDARDS; AMEND THE BUILDING MATERIALS ARTICLE; ADD NEW ARTICLES REGARDING STREET AND PEDESTRIAN LIGHTING AND PUBLIC RIGHTS OF WAY; AND PROVIDE FOR PENALTIES** (Second Reading)
    b. **Public Hearing: Ordinance 17-02, AN ORDINANCE AMENDING CHAPTER 15 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE THE 2017 FLOOD INSURANCE STUDY FOR DOUGLAS COUNTY AND ACCOMPANYING FLOOD INSURANCE RATE MAPS, DIGITAL FLOOD RATE MAPS AND FLOOD BOUNDARY FLOODWAY MAPS; AMEND**

STORMWATER DISCHARGE DEFINITION; ADD A NEW ARTICLE REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AND PROVIDE FOR PENALTIES (Second Reading)

c. **Public Hearing: Ordinance 17-03, AN ORDINANCE AMENDING CHAPTER 16 OF THE MUNICIPAL CODE TO REPEAL ARTICLE XXXI REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AMEND USE AND STRUCTURE RESTRICTIONS NEAR AIRPORTS; ADD A PROVISION REGARDING RAIN BARRELS; AND AMEND AND UPDATE MISCELLANEOUS PROVISIONS** (Second Reading)

d. **Public Hearing: Ordinance 17-04, AN ORDINANCE AMENDING CHAPTER 17 OF THE MUNICIPAL CODE TO AMEND AND UPDATE MISCELLANEOUS PROVISIONS** (Second Reading)

e. **Public Hearing: Ordinance 17-05, AN ORDINANCE AMENDING CHAPTER 18 OF THE MUNICIPAL CODE TO AMEND THE 2012 INTERNATIONAL RESIDENTIAL CODE REGARDING DRAINAGE EROSION SEDIMENT CONTROL PERMITS** (Second Reading)

11. Council Comments
12. Adjournment

City of Lone Tree Upcoming Events
more info available at www.cityoflonetree.com & www.lonetreeartscenter.org

- Commissioners' Choice Reception and "Light Play" Interior Art Dedication, Thursday, January 19th, 6:00 – 7:30 p.m., LTAC Lobby.
- Hillbenders: Tommy, a Bluegrass Opry, Thursday, January 19th, 7:30 p.m., LTAC Main Stage.
- Muscle Shoals: I'll Take You There, Thursday, February 2nd – Sunday, February 12th, LTAC Main Stage.

MINUTES OF A REGULAR MEETING
OF THE COUNCIL OF THE
CITY OF LONE TREE
HELD
January 3, 2017

A regular meeting of the Council of the City of Lone Tree was held on Tuesday, January 3, 2017, at 7:00 p.m., at the Lone Tree City Council Chambers located at 8527 Lone Tree Parkway, Lone Tree, Colorado 80124.

Attendance

In attendance were:

Jacqueline Millet, Mayor
Susan Squyer, Mayor Pro Tem
Cathie Brunnick, Council Member
Jay Carpenter, Council Member
Wynne Shaw, Council Member

Also in attendance were:

Seth Hoffman, City Manager
Jennifer Pettinger, City Clerk
Steve Hebert, Deputy City Manager
Jeff Holwell, Economic Development Director
Interim Chief Ron Pinson, Lone Tree Police Department
Kristin Baumgartner, Finance Director
Kelly First, Community Development Director
Neil Rutledge, Assistant City Attorney, White, Bear and Ankele, P.C.
John Cotten, Public Works Director, TTG Corp.

Call to Order

Mayor Millet called the meeting to order at 7:01 p.m., and observed that a quorum was present.

Pledge of Allegiance

Mayor Millet led those assembled in reciting the Pledge of Allegiance.

Amendments to the Agenda

Council Member Brunnick moved, Council Member Carpenter seconded, to amend the agenda to add the APPROVAL OF COMMISSIONER'S CHOICE SELECTION to the Agenda. The motion passed with a 5 to 0 vote. Mayor Millet noted it would be added to the end of the agenda.

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Conflict of Interest

There was no conflict of interest.

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Public Comment

There was no public comment.

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Announcements

Andres Pulido, Youth Commissioner, gave Council an update on the Youth Commission.

Mayor Millet announced upcoming events.

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Ceremonial Presentations

Commissions, Boards & Committees (CBC) Recognition of Service

Mayor Millet recognized the service of outgoing Commissions, Boards & Committees (CBC) members:

Jay Carpenter	Citizens' Recreation Advisory Committee	2010-2016
Patrick Britti	Youth Commission	2013-2016
Michelle Timmins	Youth Commission	2014-2016
Nora Pearson	Arts Commission	2011-2016
Debi Haning	Arts Commission	2008-2016
Herb Steele	Planning Commission	2013-2016
Angela Hardin	Citizens' Recreation Advisory Committee	2010-2016
Alistair Green	Citizens' Recreation Advisory Committee	2013-2016

Mayor Millet presented a service plaque to everyone except: Nora Pearson, Herb Steele and Alistair Green who were unable to attend.

Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting

Kristin Baumgartner, Finance Director, presented Council with the 2015 Certificate of Achievement for Excellence in Financial Reporting Award.

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Consent Agenda

Mayor Millet noted the following items on the Consent Agenda, which consisted of:

- *Minutes of the December 6, 2016 Regular Meeting*
- *Claims for the period of November 29 – December 26, 2016*
- *Treasurer's Report for October 2016*

Council Member Shaw moved, Council Member Brunnick seconded, to approve

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the Consent Agenda. The motion passed with a 5 to 0 vote.

Community Development

Ordinance 17-01, AN ORDINANCE AMENDING CHAPTER 11 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE AND AMEND THE DOUGLAS COUNTY ROADWAY AND DESIGN STANDARDS; AMEND THE BUILDING MATERIALS ARTICLE; ADD NEW ARTICLES REGARDING STREET AND PEDESTRIAN LIGHTING AND PUBLIC RIGHTS OF WAY; AND PROVIDE FOR PENALTIES (First Reading)

Jennifer Drybread, Senior Planner, and Lisa Albers, Capital Improvement Project Manager, introduced the item.

Council Member Carpenter moved, Mayor Pro Tem Squyer seconded, to approve **Ordinance 17-01, AN ORDINANCE AMENDING CHAPTER 11 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE AND AMEND THE DOUGLAS COUNTY ROADWAY AND DESIGN STANDARDS; AMEND THE BUILDING MATERIALS ARTICLE; ADD NEW ARTICLES REGARDING STREET AND PEDESTRIAN LIGHTING AND PUBLIC RIGHTS OF WAY; AND PROVIDE FOR PENALTIES** on First Reading. The motion passed with a 5 to 0 vote.

Ordinance 17-02, AN ORDINANCE AMENDING CHAPTER 15 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE THE 2017 FLOOD INSURANCE STUDY FOR DOUGLAS COUNTY AND ACCOMPANYING FLOOD INSURANCE RATE MAPS, DIGITAL FLOOD RATE MAPS AND FLOOD BOUNDARY FLOODWAY MAPS; AMEND STORMWATER DISCHARGE DEFINITION; ADD A NEW ARTICLE REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AND PROVIDE FOR PENALTIES (First Reading)

Lisa Albers, Capital Improvement Project Manager, introduced the item.

Mayor Pro Tem Squyer moved, Council Member Shaw seconded, to approve **Ordinance 17-02, AN ORDINANCE AMENDING CHAPTER 15 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE THE 2017 FLOOD INSURANCE STUDY FOR DOUGLAS COUNTY AND ACCOMPANYING FLOOD INSURANCE RATE MAPS, DIGITAL FLOOD RATE MAPS AND FLOOD BOUNDARY FLOODWAY MAPS; AMEND STORMWATER DISCHARGE DEFINITION; ADD A NEW ARTICLE REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AND PROVIDE FOR PENALTIES** on First Reading**.** The motion passed with a 5 to 0 vote.

Ordinance 17-03, AN ORDINANCE AMENDING CHAPTER 16 OF THE MUNICIPAL CODE TO REPEAL ARTICLE XXXI REGARDING CLEARING,

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GRADING AND LAND DISTURBANCE; AMEND USE AND STRUCTURE RESTRICTIONS NEAR AIRPORTS; ADD A PROVISION REGARDING RAIN BARRELS; AND AMEND AND UPDATE MISCELLANEOUS PROVISIONS (First Reading)

Lisa Albers, Capital Improvement Project Manager, and Jennifer Drybread, Senior Planner, introduced the item.

Council Member Shaw moved, Council Member Brunnick seconded, to approve **Ordinance 17-03, AN ORDINANCE AMENDING CHAPTER 16 OF THE MUNICIPAL CODE TO REPEAL ARTICLE XXXI REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AMEND USE AND STRUCTURE RESTRICTIONS NEAR AIRPORTS; ADD A PROVISION REGARDING RAIN BARRELS; AND AMEND AND UPDATE MISCELLANEOUS PROVISIONS** on First Reading**.** The motion passed with a 5 to 0 vote.

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Ordinance 17-04, AN ORDINANCE AMENDING CHAPTER 17 OF THE MUNICIPAL CODE TO AMEND AND UPDATE MISCELLANEOUS PROVISIONS (First Reading)

Lisa Albers, Capital Improvement Project Manager, introduced the item.

Council Member Brunnick moved, Council Member Carpenter seconded, to approve **Ordinance 17-04, AN ORDINANCE AMENDING CHAPTER 17 OF THE MUNICIPAL CODE TO AMEND AND UPDATE MISCELLANEOUS PROVISIONS** on First Reading**.** The motion passed with a 5 to 0 vote.

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Ordinance 17-05, AN ORDINANCE AMENDING CHAPTER 18 OF THE MUNICIPAL CODE TO AMEND THE 2012 INTERNATIONAL RESIDENTIAL CODE REGARDING DRAINAGE EROSION SEDIMENT CONTROL PERMITS (First Reading)

Matt Archer, Chief Building Official, introduced the item.

Council Member Brunnick moved, Mayor Pro Tem Squyer seconded, to approve **Ordinance 17-05, AN ORDINANCE AMENDING CHAPTER 18 OF THE MUNICIPAL CODE TO AMEND THE 2012 INTERNATIONAL RESIDENTIAL CODE REGARDING DRAINAGE EROSION SEDIMENT CONTROL PERMITS** on First Reading**.** The motion passed with a 5 to 0 vote.

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Administrative Matters

Resolution 17-01, A RESOLUTION APPOINTING AN ALTERNATE TO THE RUETER-HESS RECREATION AUTHORITY

Seth Hoffman, City Manager, introduced the item.

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Mayor Pro Tem Squyer moved, Council Member Shaw seconded, to approve **Resolution 17-01, A RESOLUTION APPOINTING AN ALTERNATE TO THE RUETER-HESS RECREATION AUTHORITY.** The motion passed with a 5 to 0 vote

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Public Hearing: Ordinance: 16-07, AN ORDINANCE APPROVING A FRANCHISE AGREEMENT BETWEEN THE CITY OF LONE TREE, COLORADO, AND PUBLIC SERVICE COMPANY OF COLORADO (XCEL ENERGY), GRANTING THE RIGHT TO PROVIDE, SELL AND DELIVER GAS AND ELECTRICITY TO THE CITY AND ITS RESIDENTS USING CITY STREETS AND RIGHTS-OF-WAY, PUBLIC UTILITY EASEMENTS AND OTHER CITY PROPERTY *(Second Reading)*

Mayor Millet opened the public hearing at 7:34 p.m.

Steve Hebert, Deputy City Manager, introduced the item.

Mayor Millet opened the public hearing for comment at 7:39 p.m.

There was no public comment.

The public hearing was closed at 7:39 p.m.

Council Member Shaw moved, Mayor Pro Tem Squyer seconded, to approve on Second Reading **Ordinance: 16-07, AN ORDINANCE APPROVING A FRANCHISE AGREEMENT BETWEEN THE CITY OF LONE TREE, COLORADO, AND PUBLIC SERVICE COMPANY OF COLORADO (*XCEL ENERGY*), GRANTING THE RIGHT TO PROVIDE, SELL AND DELIVER GAS AND ELECTRICITY TO THE CITY AND ITS RESIDENTS USING CITY STREETS AND RIGHTS-OF-WAY, PUBLIC UTILITY EASEMENTS AND OTHER CITY PROPERTY PURSUANT TO THE TERMS OF THE FRANCHISE AGREEMENT; AND, TO AUTHORIZE THE MAYOR TO SIGN THE FRANCHISE AGREEMENT AND SIDE LETTER AGREEMENT ADDRESSING UNDERGROUND CONVERSION AND CONTINGENCY FEE AUDITS.** The motion passed with a 5 to 0 vote.

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APPROVAL OF COMMISSIONER'S CHOICE SELECTION

Courtney Ozaki Moch, LTAC Operations & Business Director, introduced the item.

Council Member Shaw moved, Council Member Brunnick seconded, to approve the Lone Tree Arts Commission's recommendation to exhibit Leah Hendricks' exhibition "TerraScapes" as the first of two exhibitions that will be part of the Commissioners Choice program at the Lone Tree Arts Center in 2017**.** The

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motion passed with a 5 to 0 vote.

Adjournment

There being no further business, Mayor Millet adjourned the meeting at 7:54 p.m.

Respectfully submitted,

Jennifer Pettinger, CMC, City Clerk

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CITY OF LONE TREE
STAFF REPORT

TO:	**Mayor Millet and City Council**
FROM:	**Neil Rutledge**
DATE:	**January 10, 2017**
FOR:	**January 17, 2017**
SUBJECT:	**Resolution 17-02 Regarding Proposed Annexation of University of Colorado South Denver Property**

Summary
This Resolution finds that the Petition by the University of Colorado for annexation of the CU South Denver property into the City is in substantial compliance with the statutory requirements.

Cost
There is no Cost to the City, other than staff time in carrying out the annexation process.

Suggested Motion
I move to approve Resolution 17-02 regarding the proposed annexation into the City of the CU South Denver property owned by the University of Colorado.

Background
The University of Colorado has filed a Petition with the City to have its property at 10035 S. Peoria St., Parker, CO 80134, now part of unincorporated Douglas County, annexed into the City. Following review of the Petition, the City Attorney's Office has determined that the statutory requirements for formal consideration of annexation have been met. Approval of this Resolution begins the legislative process that may lead to adoption of an annexation ordinance by the City Council and inclusion of the property within the boundaries of the City.

CITY OF LONE TREE
RESOLUTION NO. 17-02

A RESOLUTION REGARDING THE PROPOSED ANNEXATION OF REAL PROPERTY TO THE CITY OF LONE TREE (UNIVERSITY OF COLORADO SOUTH DENVER)

WHEREAS, a Petition for annexation of certain real property generally known as "University of Colorado South Denver" (the "Petition") has been filed with the City of Lone Tree (the "City") by the University of Colorado requesting annexation of such property to the City; and

WHEREAS, the property that is the subject of the Petition for annexation is legally described in attached Exhibit A (the "Property"); and

WHEREAS, the City Council desires to initiate annexation proceedings in accordance with law.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LONE TREE, COLORADO:

1. City Council finds that the Petition is in substantial compliance with Section 31-12-107 (1), C.R.S., as set forth in the Municipal Annexation Act of 1965, as amended (the "Act"). Specifically, the Petition contains the following:

    a. An allegation that it is desirable and necessary that such area be annexed to the City;

    b. An allegation that the requirements of Section 31-12-104 have been met:

        i. not less than one-sixth of the perimeter of the Property is contiguous with the City;

        ii. a community of interest exists between the Property and the City;

        iii. the Property is urban or will be urbanized in the near future;

        iv. the area is integrated with or is capable of being integrated with the annexing municipality.

    c. An allegation that the requirements of Section 31-12-105, C.R.S. have been met;

d. An allegation that the signer of the Petition comprises the landowner of more than fifty percent (50%) of the territory included in the Annexation Property, exclusive of streets and alleys;

e. An allegation that the signer of the Petition is the landowner of 100% of the Annexation Property area, exclusive of streets and alleys, and consents to the establishment of the boundaries of the Annexation Property;

f. A request that the City approve the annexation of the areas proposed to be annexed;

g. The signature and mailing address of such landowner;

h. The legal description of the land owned by the signer;

i. The date of signing of each signature; and

j. The affidavit of each circulator of such Petition, that each signature therein is the signature of the person whose name it purports to be.

2. City Council directs that a public hearing on the Petition be held to determine (a) whether the proposed annexation complies with Sections 31-12-104 and 105, C.R.S., (b) whether all applicable City requirements have been satisfactorily met, and (c) whether to adopt an ordinance annexing the Property to the City.

3. The public hearing shall be held at the City Council meeting commencing at or after 7:00 p.m. on the 7th day of March, 2017, at the Lone Tree Civic Center, 8527 Lone Tree Parkway, in Lone Tree, Colorado.

ADOPTED AND APPROVED THIS 17TH DAY OF JANUARY, 2017.

CITY OF LONE TREE

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Jacqueline A. Millet, Mayor

ATTEST:

(SEAL)

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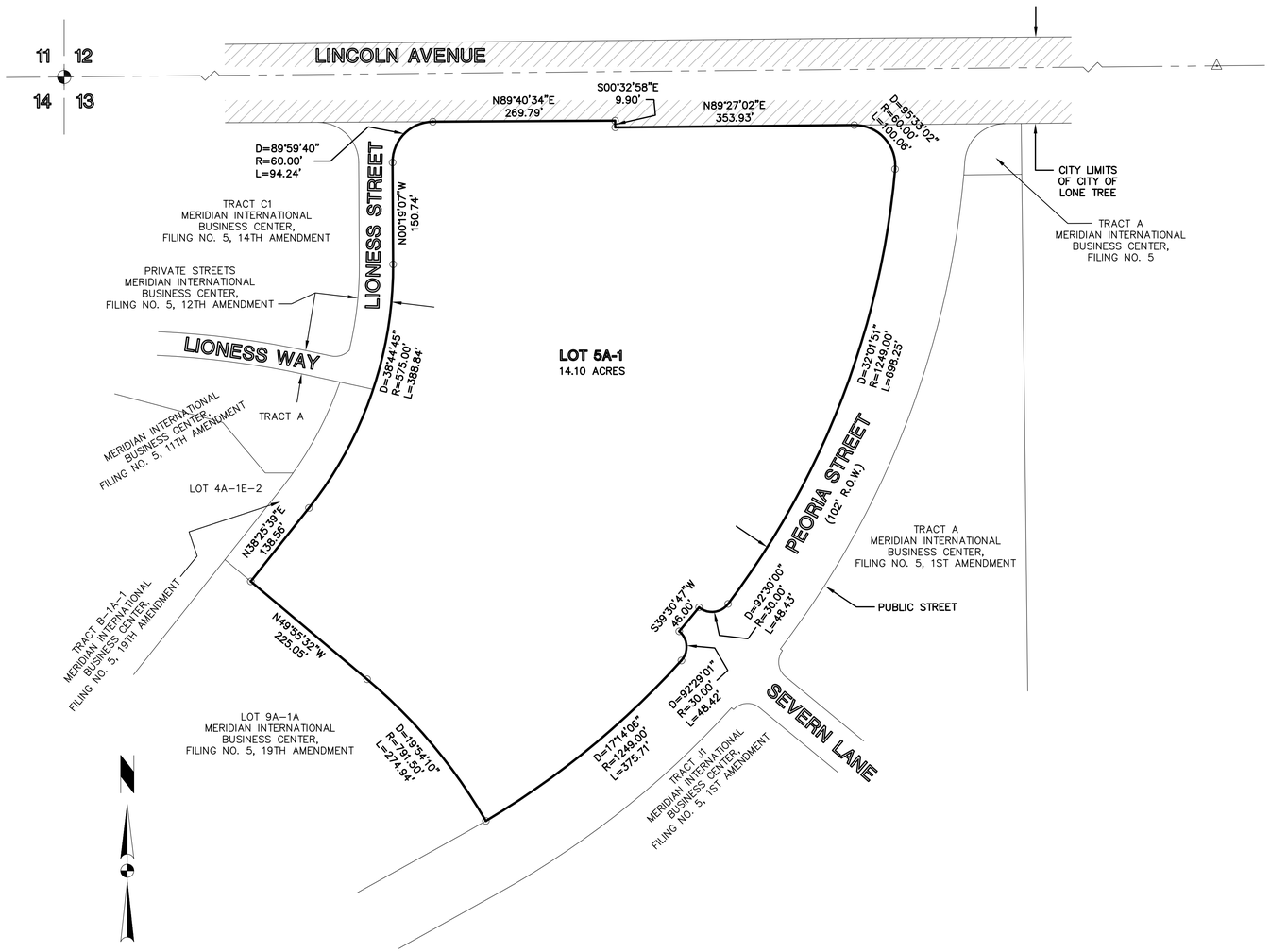
Jennifer Pettinger, CMC, City Clerk

EXHIBIT A

Legal Description

CU SOUTH DENVER ANNEXATION
TO THE CITY OF LONE TREE

LOTS 5A-1 OF MERIDIAN INTERNATIONAL BUSINESS CENTER FILING NO. 5, 5TH AMENDMENT,
LOCATED IN THE NW 1/4 OF SECTION 13, TOWNSHIP 6 SOUTH, RANGE 67 WEST OF THE 6TH P.M.,
DOUGLAS COUNTY, COLORADO



LEGAL DESCRIPTION

LOT 5A–1, OF MERIDIAN INTERNATIONAL BUSINESS CENTER FILING NO. 5, 5TH AMENDMENT, ACCORDING TO THE RECORDED PLAT THEREOF, DOUGLAS COUNTY, COLORADO, CONTAINING 14.10 ACRES, MORE OR LESS.

SURVEYOR'S CERTIFICATE

I, MICHAEL C. CREGGER, DO HEREBY CERTIFY THAT THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, THAT IT IS A GRAPHICAL REPRESENTATION OF THE ABOVE DESCRIBED PARCEL OF LAND AND THAT MORE THAN ONE–SIXTH (1/6) OF THE EXTERNAL BOUNDARY OF THE ABOVE DESCRIBED PARCEL IS CONTIGUOUS WITH THE PRESENT BOUNDARIES OF THE CITY OF LONE TREE.

_____
PROFESSIONAL LAND SURVEYOR
COLORADO REGISTRATION NO. 22564

COLORADO REGISTERED
MICHAEL C. CREGGER
22564
PROFESSIONAL LAND SURVEYOR

CITY COUNCIL APPROVAL

APPROVED BY THE CITY COUNCIL OF THE CITY OF LONE TREE, DOUGLAS COUNTY, COLORADO THIS _____ DAY OF _____, 20____ .

_____ _____
MAYOR CITY CLERK

COUNTY OF _____)
)
STATE OF COLORADO)

SUBSCRIBED AND SWORN TO BEFORE ME THIS ____ DAY OF _____, 20___, BY _____, AS MAYOR OF CITY OF LONE TREE, COLORADO AND ATTESTED TO BY _____, AS CITY CLERK OF CITY OF LONE TREE, COLORADO.

WITNESS MY HAND AND OFFICIAL SEAL:

NOTARY PUBLIC _____

MY COMMISSION EXPIRES: _____

DOUGLAS COUNTY CLERK AND RECORDER'S CERTIFICATE

THIS ANNEXATION MAP WAS FILED FOR RECORD IN THE OFFICE OF THE COUNTY CLERK AND RECORDER OF DOUGLAS COUNTY AT _____ ___.M. ON THE _____ DAY OF _____, 20_____ AT RECEPTION NO. _____.

DOUGLAS COUNTY CLERK AND RECORDER

BY: _____
DEPUTY

TTG ENGINEERS, INC.

CU SOUTH DENVER ANNEXATION
TO THE CITY OF LONE TREE

SHEET 1 OF 1

CITY OF LONE TREE

STAFF REPORT

TO: **Mayor Millet and City Council**

FROM: **Darin Rose, CFM, SFP GGP, Facilities Manager**

FOR: **January 17, 2017 Council Meeting**

DATE: **January 11, 2017**

SUBJECT: **Approval of Yosemite "Community Center" Remodeling Contract**

Summary

The City purchased the former library building on September 9, 2016. Staff previously provided options to the City Council for the future use of the facility. It was determined the best use was to have it available as a multi-generational community center. The City has entered into an inter-governmental agreement (IGA) with South Suburban Parks and Recreation District to operate the facility. The IGA includes a description of the agreed-upon programming opportunities for the building, stating that as a community resource, it "will be inclusive and multigenerational in nature with unique opportunities for the entire community with varying interests and ages."

The Council approved 2017 Budget includes $609,000 for remodeling and furniture, fixtures and equipment (FF&E) for this building.

Staff has solicited bids for remodeling of the interior space and is recommending approval of a contract with Mark Young Construction in the amount of $281,466.

Cost

The total construction cost is estimated to be $309,613, including a ten percent contingency fee.

Suggested Motion or Recommendation Action

I move to approve a contract with Mark Young Construction, Inc. for an amount not to exceed $309,613 for renovating the recently acquired former library facility and authorize the city manager to enter into a contract for such services.

Background

The architectural firm of Barker Rinker Seacat was engaged to design the interior space for reuse of the facility. Their architectural plans resulted in a scope of work used for the

competitive bid process. The bid process was an open invitation through the Rocky Mountain Bid System. Staff hosted a recommended meeting to give contractors the opportunity to inspect the facility and site conditions. Sealed bids were received on January 6, 2017 and evaluated by staff. We received five qualifying proposals. Base pricing ranged from $275,495 to $385,836.

The two low bidders were Mark Young Construction and T-Bone Construction. Although Mark Young Construction is approximately 5% higher than T-Bone Construction, Mark Young's portfolio is extensive and reflects experience with similar public projects including the Douglas County Sheriff's Substation in Highlands Ranch, North Metro Fire Rescue District Administrative Headquarters, the Town of Avon Recreation Center, and town halls for the Town of Erie and the Town of Johnstown.

The scope of work will include:

- Creating two multipurpose rooms with a manually operated partition wall
- Painting the entire interior
- New carpeting and flooring in the restrooms
- Adding concrete in the Reading Patio
- New casework desk
- Adding additional acoustic enhancements and finishes.

Not included in this request is furniture, fixtures and equipment (FFE) including Audio/Visual (AV) and Information Technology (IT) requirements. These needs will be evaluated and submitted for review once selections have been made.

Construction work is estimated to take up to twelve weeks to complete. With a February 10, 2017 start date, the contractor believes they will be able to finish the work by April 30, 2017.

Approved 2017 Project Budget	**$609,000**
Remodel Construction Cost	$281,466
10% Contingency	$ 28,147
Construction Project Total	**$309,613**
Remaining Available Funds for FFE, AV, IT	$299,387

<u>Attachments:</u>
Attachment A: Sample Layouts of Finished Interior
Attachment B: Summary of Bid Results
Attachment C: Agreement with Contractor

Library Reuse Project

SAMPLE LAYOUTS OF FINISHED INTERIOR

January 11, 2017

CITY OF LONE TREE

New Layout & Paint

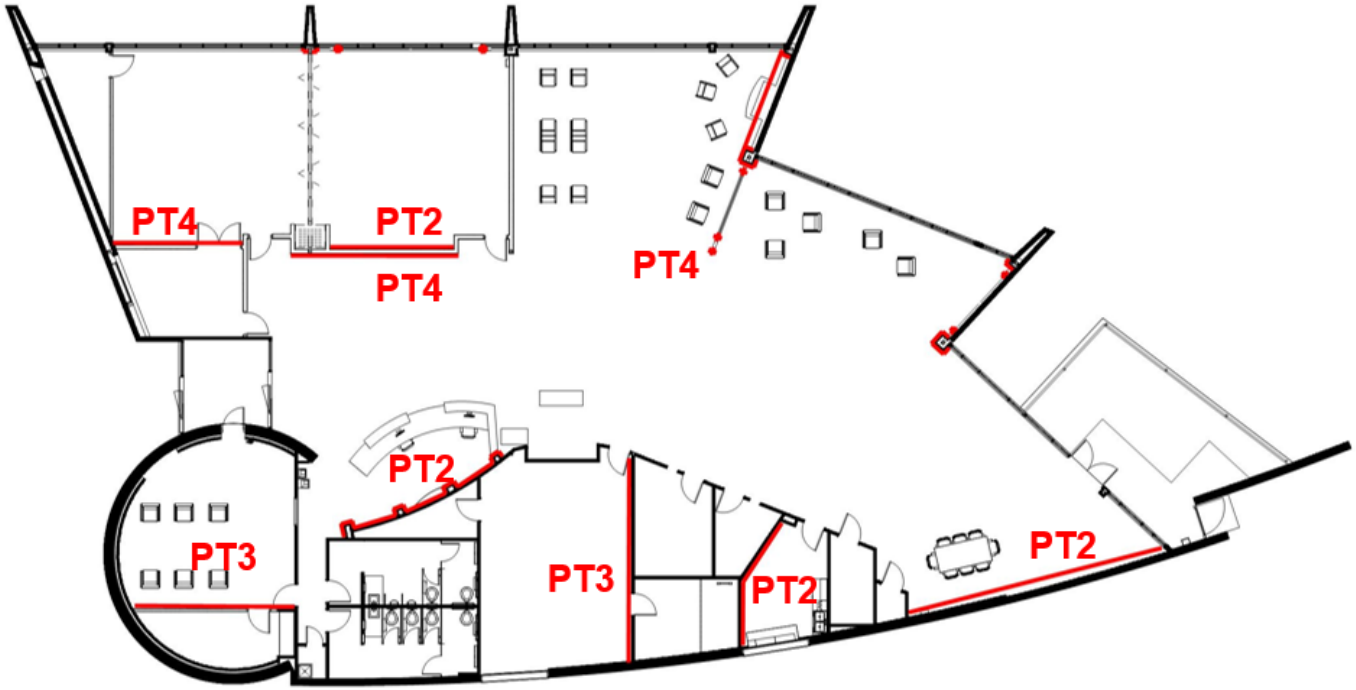
PT1
BASE

PT2
ACCENT

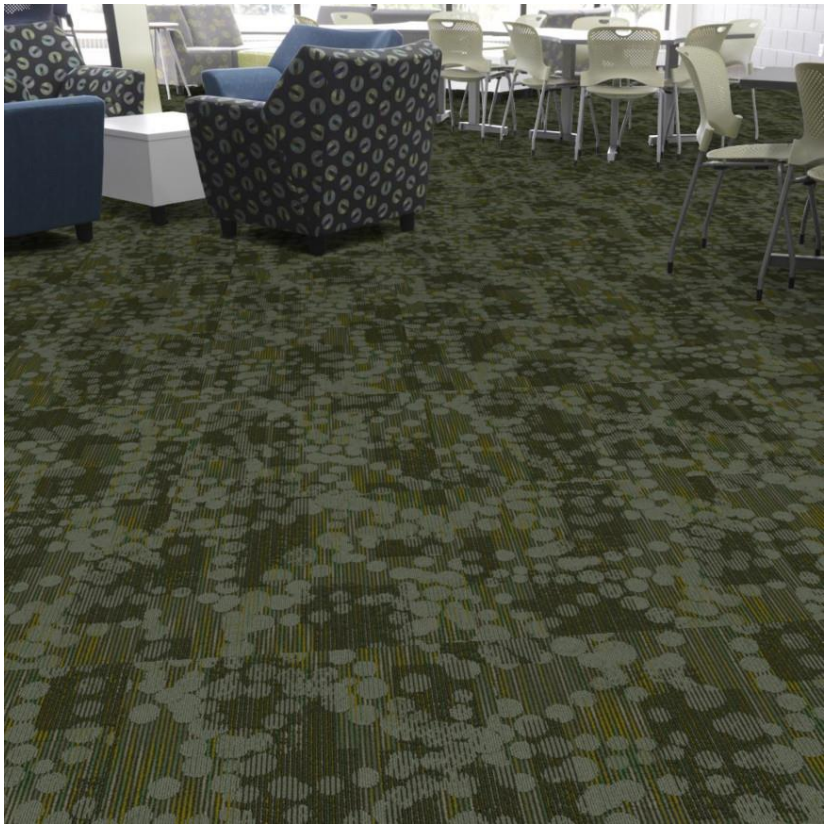
PT3
ACCENT

PT4
ACCENT

PT5
DOOR
FRAME



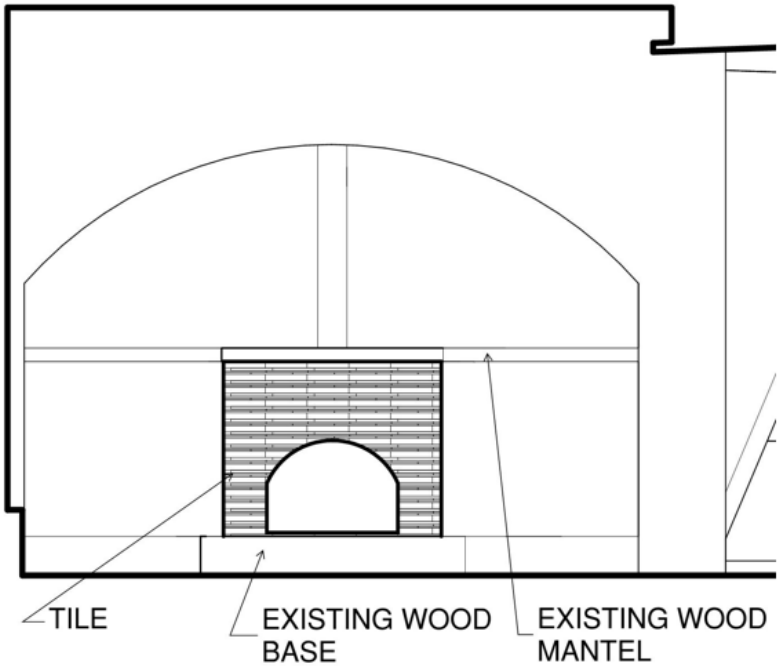
New Flooring



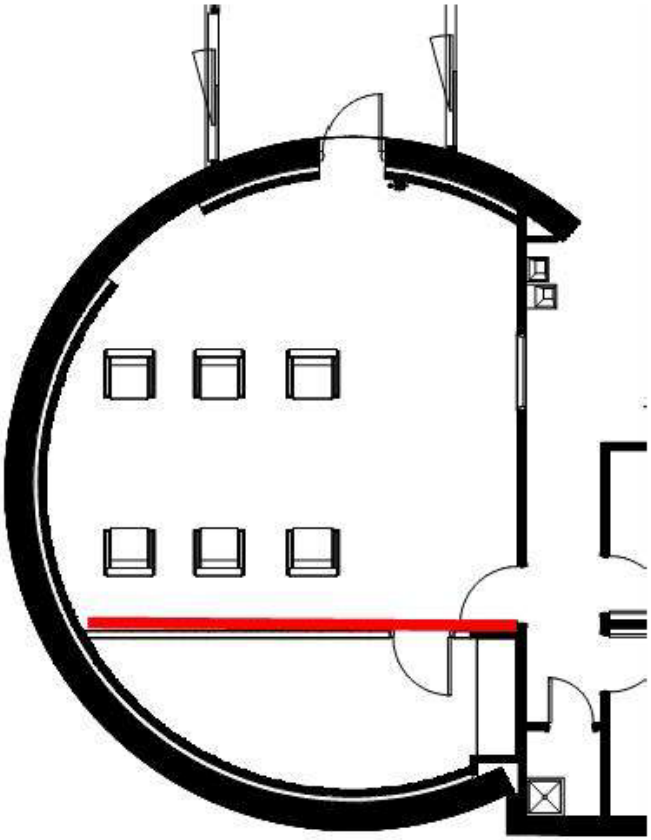
New Reception Desk

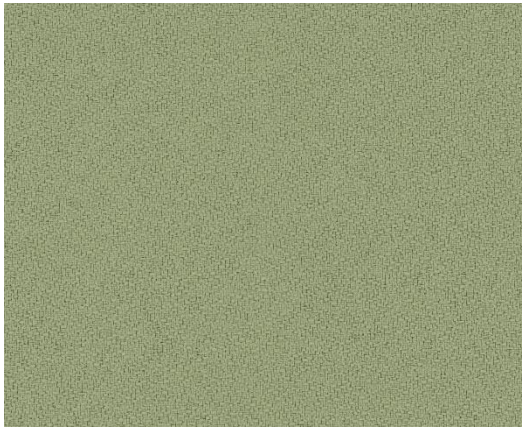
View of Open Area

New Tile on Fireplace



Better Acoustics in Round Room





Attachment A

New Partition Wall for Flexibility

Photo is the type of wall to be installed.
Finish color is to the left.

Attachment A

City of Lone Tree

Library Reuse Project Bid Summary

All Construction per Project Number 2016.027.01, 21 page Remodel plans dated 2016.11.23

Date: January 11, 2017

Contractor Name:	Mark Young Construction Inc.	T-Bone Construction Inc.	Carwile Construction	Centerre Construction	Bassett & Associates, Inc.	Adjoiner Corporation	Piedmont Contracting	Larkin and Associates
Primary Proposal							FLOORING	ONLY
Sub-Total	$ 249,149	$ 230,136	$ 264,960	$ 282,854	$ 345,000	$ 369,211.00	$ 44,700.00	$ 44,444.40
Alternate Proposed Items								
Sub-Total	$ 18,914	$ 32,240	$ 24,320	$ 37,553	$ 22,463	$ 62,625.00	$ 5,600.00	$ 4,000.00
Total	$ 268,063	$ 262,376	$ 289,280	$ 320,407	$ 367,463	$ 431,836	$ 50,300	$ 48,444
5% Performance Bond Fee	$ 13,403	$ 13,119	$ 14,464	$ 16,020	$ 18,373	$ 21,592	$ 2,515	$ 2,422
Total	$ 281,466	$ 275,495	$ 303,744	$ 336,427	$ 385,836	$ 453,428	$ 52,815	$ 50,867
10% Contingency	$ 28,147	$ 27,549	$ 30,374	$ 33,643	$ 38,584	$ 45,343	$ 5,282	$ 5,087
Grand Total	$ 309,613	$ 303,044	$ 334,118	$ 370,070	$ 424,420	$ 498,771	$ 58,097	$ 55,953
Additional Comments:						Adjoiner proposal submitted after the deadline of 1pm 1.6.17, thus is invalid for consideration. Bid is included to acknowledge receipt of proposal.	Carpet price $43,800+960 vapor testing, and does not include demo.	Flooring contractor proposed on flooring only.

INDEPENDENT CONTRACTOR AGREEMENT
CITY OF LONE TREE
TENANT IMPROVEMENT

This **INDEPENDENT CONTRACTOR AGREEMENT**, including any and all exhibits attached hereto (the "Agreement"), is entered into as of the 5th day of July, 2016, by and between **THE CITY OF LONE TREE**, a home rule municipal corporation and political subdivision of the State of Colorado (the "City"), and **Mark Young Construction Inc.,** a Colorado LLC (the "Contractor"). The City and the Contractor are referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, the City was organized pursuant to Title 31 of the Colorado Revised Statutes to provide certain services within its corporate boundaries; and

WHEREAS, the City is authorized to contract for the provision of such services pursuant to § 31-15-101, C.R.S., as amended; and

WHEREAS, funds have been budgeted and are available for the work to be performed by the Contractor under this Agreement, and other necessary approvals have been obtained; and

WHEREAS, the City desires to engage the Contractor to render the services described in this Agreement; and

WHEREAS, the Contractor has represented that it has the professional experience, skill and resources to perform the services, as set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants and stipulations set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

TERMS AND CONDITIONS

1. SCOPE OF SERVICES. The Contractor shall perform the services described in **Exhibit A**, attached hereto and incorporated herein by this reference (the "Services"): (a) in a first-class manner, to the satisfaction of the City, using the degree of skill and knowledge customarily employed by other professionals performing similar services in the area of the City; (b) within the time period and pursuant to the Scope of Services specified in said **Exhibit A**; and (c) in compliance with all applicable federal, state, county and local or municipal body or agency statutes, ordinances and regulations, including, without limitation, any licensing, bonding, and permit requirements, and including without limitation, any such laws relating to storage, use or disposal of hazardous wastes, substances or materials. **Exhibit A** may take any form, including forms which may include price and payment terms. In the event of any conflict between terms set forth in the body of this Agreement and terms set forth in **Exhibit A**, the terms in the body

of this Agreement shall govern. Contractor shall have no right or authority, express or implied, to take any action, expend any sum, incur any obligation, or otherwise obligate the City in any manner whatsoever, except to the extent specifically provided in this Agreement.

2. TERM/RENEWAL.

a. This Agreement shall be effective as of January 10, 2017 and shall terminate upon completion of the Project.

b. This Agreement is contingent upon and subject to approval by the City Council. If such approval is granted after the effective date, the effective date shall be extended until such approval is received.

3. ADDITIONAL SERVICES. The City may, in writing, request the Contractor to provide additional services not set forth in **Exhibit A**. The terms and conditions of the provision of such services shall be subject to the mutual agreement of the Contractor and the City pursuant to a written service/work order executed by an authorized representative of the City and the Contractor. Authorization to proceed with additional services shall not be given unless the City has appropriated funds sufficient to cover the additional compensable amount. To the extent additional services are provided pursuant to this Section 3, the terms and conditions of this Agreement relating to Services shall also apply to any additional services rendered.

4. REPAIRS/CLAIMS. The Contractor shall notify the City immediately of any and all damage caused by the Contractor to City property and that of third parties. The Contractor will promptly repair or, at the City's option, reimburse the City for the repair of any damage to property caused by the Contractor or its employees, agents or equipment. In addition, the Contractor shall promptly notify the City of all potential claims it becomes aware of. The Contractor further agrees to take all reasonable steps to preserve all physical evidence and information which may be relevant to the circumstances surrounding a potential claim, while maintaining public safety, and to grant to the City the opportunity to review and inspect such evidence, including the scene of any damage or accidents. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Services and shall provide all reasonable protection to prevent damage or injury to persons and property, including any material and equipment related to the Services, whether in storage on or off site, under the care, custody, or control of the Contractor or any of its subcontractors.

5. GENERAL PERFORMANCE STANDARDS.

a. The Contractor has by careful examination ascertained (i) the nature and location of the Services; (ii) the configuration of the ground on which the Services are to be performed; (iii) the character, quality, and quantity of the labor, materials, equipment and facilities necessary to complete the Services; (iv) the general and local conditions pertaining to the Services; and (v) all other matters which in any way may affect the performance of the Services by the Contractor. Contractor enters into this Agreement solely

because of the results of such examination and not because of any representations pertaining to the Services or the provision thereof made to it by the City or any agent of the City and not contained in this Agreement. The Contractor represents that it has or shall acquire the capacity and the professional experience and skill to perform the Services and that the Services shall be performed in accordance with the standards of care, skill and diligence provided by competent professionals who perform services of a similar nature to those specified in this Agreement. If competent professionals find that the Contractor's performance of the Services does not meet this standard, the Contractor shall, at the City's request, re-perform the Services not meeting this standard without additional compensation.

b. The Services of the Contractor shall be undertaken and completed to assure their expeditious completion in light of the purposes of this Agreement. If performance of the Services by the Contractor is delayed due to factors beyond the Contractor's reasonable control, or if conditions of the scope or type of services are expected to change, Contractor shall give timely notice to the City of such a delay or change and receive an equitable adjustment of time and/or compensation, as negotiated between the Parties.

c. The Services provided under this Agreement shall be adequate and sufficient for the intended purposes and shall be completed in a good and workmanlike manner.

d. The Contractor declares that it has complied with all Federal, State and local laws, rules, regulations, ordinances and/or similar directives regarding business permits, certificates and licenses that are required to provide the Services under this Agreement.

e. The responsibilities and obligations of the Contractor under this Agreement shall not be relieved or affected in any respect by the presence of any agent, consultant, sub-consultant or employee of the City. Acceptance of the Services or any documents performed or prepared by the Contractor by the City shall not relieve the Contractor of any responsibility for deficiencies, omissions or errors in said Services or documents.

6. MONTHLY STATUS REPORT. The Contractor shall provide to the City, at the City's request, on or before the 25th of each month, a narrative progress and status report describing work in progress and results achieved during the reporting period, including a description of the Services performed during the invoice period and the Services anticipated to be performed during the ensuing invoice period ("Monthly Report").

7. COMPENSATION AND INVOICES.

a. Compensation. Compensation for the Services provided under this Agreement shall be in accordance with the "Fee Schedule" or "Contract Price," attached proposal hereto as **Exhibit B**. The Contractor shall be responsible for all expenses it incurs in performance of this Agreement and shall not be entitled to any reimbursement or compensation except as provided in **Exhibit B** of this Agreement, unless said

reimbursement or compensation is approved in writing by the City in advance of incurring such expenses prior to commencing the requested services.

b. Invoices. Invoices for the Services shall be submitted at increments as mutually determined by both the City and the Contractor, 10% retention, during the term of the Agreement and shall contain the following information:

i. An itemized statement of the Services performed.

ii. Any other reasonable information required by the City to process payment of the invoice, including project and/or cost codes as provided in any applicable written service/work order.

The City shall be charged only for the actual time and direct costs incurred for the performance of the Services.

8. TIME FOR PAYMENT. Payment for the Services shall be made by the City within thirty (30) days of receipt of (i) a timely, satisfactory and detailed invoice and (ii) if applicable, a satisfactory and detailed report, for that portion of the Services performed and not previously billed. The City may determine to waive or extend the deadline for filing the report, or may make payment for Services to the Contractor notwithstanding a delay in filing the report, upon reasonable request of the Contractor, if it is in the best interest of the City to do so. In the event a City Council meeting is not scheduled in time to review payment of an invoice, the City hereby authorizes payment for Services, subject to the appropriation and budget requirements under Section 27, without the need for additional Council approval, so long as any payment required to be made does not exceed the amounts appropriated for such Services as set forth in the City's approved budget. Such payment shall require review and approval of each report and invoice by the City Manager or applicable Department Head, as appropriate, subject to ratification at the next succeeding special or regular Board meeting.

9. INDEPENDENT CONTRACTOR. The Contractor is an independent contractor and nothing herein shall constitute or designate the Contractor or any of its employees or agents as employees or agents of the City. The Contractor shall have full power and authority to select the means, manner and method of performing its duties under this Agreement, without detailed control or direction from the City, and shall be responsible for supervising its own employees or subcontractors. The City is concerned only with the results to be obtained. The City shall not be obligated to secure, and shall not provide, any insurance coverage or employment benefits of any kind or type to or for the Contractor or its employees, sub-consultants, contractors, agents, or representatives, including coverage or benefits related but not limited to: local, state or federal income or other tax contributions, insurance contributions (e.g. FICA taxes), workers' compensation, disability, injury, health or life insurance, professional liability insurance, errors and omissions insurance, vacation or sick-time benefits, retirement account contributions, or any other form of taxes, benefits or insurance. The Contractor shall be responsible for its safety, the safety of its employees, the public and the work site in general and shall

comply with all applicable provisions of local, state and federal laws, regulations and orders affecting safety and health, including but not limited to the Occupational Safety and Health Act of 1970 (OSH Act). All personnel furnished by the Contractor will be deemed employees of the Contractor and will not for any purpose be considered employees or agents of the City, and the Contractor will comply with all employment laws relative to such employees, including but not limited to Wage and Hour laws, Worker Compensation Laws, Immigration Laws and OSHA-type laws. **The Contractor is not entitled to worker's compensation benefits or unemployment insurance benefits, unless unemployment compensation coverage is provided by the Contractor or some other entity other than the City, and the Contractor is obligated to pay federal and state income taxes on moneys earned pursuant to this Agreement.**

10. EQUAL OPPORTUNITY; EMPLOYMENT ELIGIBILITY. This Agreement is subject to all applicable laws and executive orders relating to equal opportunity and non-discrimination in employment and the Contractor represents and warrants that it will not discriminate in its employment practices in violation of any such applicable law or executive order.

The Contractor hereby states that it does not knowingly employ or contract with Undocumented Workers and that the Contractor has participated in or has attempted to participate in the E-Verify Program or Department Program (formerly known as the Basic Pilot Program) (as defined in § 8-17.5-101, C.R.S.) in order to verify that it does not employ any Undocumented Workers. The Contractor affirmatively makes the follow declarations:

a. The Contractor shall not knowingly employ or contract with an Undocumented Worker who will perform work under the public contract for services contemplated herein and will participate in the E-Verify Program or Department Program (as defined in § 8-17.5-101, C.R.S.) in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services contemplated herein.

b. The Contractor shall not knowingly enter into a contract with a subcontractor that fails to certify to the Contractor that the subcontractor shall not knowingly employ or contract with an Undocumented Worker to perform the services contemplated herein.

c. The Contractor has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services through participation in either the E-Verify Program or the Department Program.

d. The Contractor is prohibited from using either the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

e. If the Contractor obtains actual knowledge that a subcontractor performing the services under this Agreement knowingly employs or contracts with an Undocumented Worker, the Contractor shall be required to:

i. Notify the subcontractor and the City within three (3) days that the Contractor has actual knowledge that the subcontractor is employing or contracting with an Undocumented Workers.

ii. Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required above the subcontractor does not stop employing or contracting with the Undocumented Worker; except that the Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an Undocumented Worker.

f. The Contractor shall comply with any reasonable request by the Department of Labor and Employment made in the course of an investigation that such Department is undertaking pursuant to the authority established in § 8-17.5-102, C.R.S.

g. If the Contractor violates a provision of the Agreement pursuant to § 8-17.5-102, C.R.S., the City may terminate the Agreement. If the Agreement is so terminated, the Contractor shall be liable for actual and consequential damages to the City.

11. CONTRACTOR'S INSURANCE.

a. The Contractor shall acquire and maintain, at its sole cost and expense, during the entire term of this Agreement, insurance coverage in the minimum amounts set forth in **Exhibit C**, attached hereto and incorporated herein by this reference. A waiver of subrogation and rights of recovery against the City, its directors, officers, employees and agents is required for each coverage provided. The insurance policies will be endorsed to name the City and its respective managers, council members, officers, directors, partners and employees, as additional insured. All coverage provided pursuant to this Agreement shall be written as primary policies, not contributing with and not supplemental to any coverage that the City may carry, and any insurance maintained by the City shall be considered excess. The City shall have the right to verify or confirm, at any time, all coverage, information or representations contained herein.

b. Prior to commencing any work under this Agreement, the Contractor shall provide the City with a certificate or certificates evidencing the policies required by this Agreement, as well as the amounts of coverage for the respective types of coverage. If the Contractor subcontracts any portion(s) of the Services, said subcontractor(s) shall be required to furnish certificates evidencing statutory workers' compensation insurance, comprehensive general liability insurance and automobile liability insurance in amounts satisfactory to the City and the Contractor. If the coverage required expires during the term of this Agreement, the Contractor or subcontractor shall provide replacement certificate(s) evidencing the continuation of the required policies.

c. The Contractor's failure to purchase the required insurance shall not serve to release it from any obligations contained herein; nor shall the purchase of the required insurance serve to limit the Contractor's liability under any provision herein. The Contractor shall be responsible for the payment of any deductibles on issued policies.

12. CONFIDENTIALITY AND CONFLICTS.

a. The Parties agree that the Contractor may, in the course of its duties hereunder, receive information concerning the City, its employees, elected and appointed officials, property, equipment and functions. Contractor agrees to hold all such information confidential and to not disclose the same other than to the extent required to perform its duties, or upon a proper request from an authorized City official, or pursuant to a proper request under the Colorado Open Records Act §§ 24-72-202, *et seq*., C.R.S., to which the authorized City official has confirmed it is appropriate for Contractor to respond or pursuant to a lawful court order. The requirements of this Section shall survive the termination of this Agreement.

b. Conflicts. Prior to the execution of, and during the performance of this Agreement and prior to the execution of future agreements with the City, the Contractor agrees to notify the owner of conflicts that impact the Services to the City.

13. OWNERSHIP OF DOCUMENTS. All documents produced by or on behalf of the Contractor prepared pursuant to this Agreement, including, but not limited to, all maps, plans, drawings, specifications, reports, electronic files and other documents, in whatever form, shall remain the property of the City under all circumstances, upon payment to the Contractor of the invoices representing the work by which such materials were produced. The Contractor shall maintain electronic and reproducible copies on file of any such instruments of service involved in the Services, shall make them available for the City's use, and shall provide such copies to the City upon request at no cost.

14. LIENS AND ENCUMBRANCES. The Contractor shall not have any right or interest in any City assets, nor any claim or lien with respect thereto, arising out of this Agreement or the performance of the services contemplated herein. The Contractor, for itself, hereby waives and releases any and all statutory or common law mechanic's, materialmen's or other such lien claims, or rights to place a lien upon the City's property or any improvements thereon in connection with any Services performed under or in connection with this Agreement, and the Contractor shall cause all permitted subcontractors, suppliers, materialmen, and others claiming by, through or under the Contractor to execute similar waivers prior to commencing any work or providing any materials in connection with the Services. The Contractor further agrees to execute a sworn affidavit respecting the payment and lien releases of all subcontractors, suppliers and materialmen, and release of lien respecting the Services at such time or times and in such form as may be reasonably requested by the City. The Contractor will provide indemnification against all such liens for labor performed, materials supplied or used by

the Contractor and/or any other person in connection with the Services undertaken by the Contractor, in accordance with Section 15(b) below.

15. INDEMNIFICATION.

a. The Contractor shall defend, indemnify and hold harmless the City and each of its directors, council members, officers, contractors, employees, agents and consultants, from and against any and all claims, demands, losses, liabilities, actions, lawsuits, damages, and expenses, including reasonable legal expenses and attorneys' fees, arising directly or indirectly, in whole or in part, out of the errors or omissions, negligence, willful misconduct, or any criminal or tortious act or omission of the Contractor or any of its subcontractors, officers, agents or employees, in connection with this Agreement and/or the Contractor's performance of the Services or work pursuant to this Agreement. The Contractor is not obligated to indemnify the City for the City's own negligence. This indemnification obligation will not be limited in any way by any limitation on the amount or types of damages, compensation or benefits payable by or for the Contractor under worker's compensation acts, disability acts or other employee benefit acts.

b. The Contractor will at all times indemnify, defend and hold the City and its directors, council members, officers, managers, agents and employees harmless against any liability for claims and liens for labor performed or materials used or furnished in the performance of Contractor's Services, including any costs and expenses incurred in the defense of such claims and liens, reasonable attorneys' fees and any damages to the City resulting from such claims or liens. After written demand by the City, the Contractor will immediately cause the effect of any suit or lien to be removed from the City's property. In the event the Contractor fails to do so, the City is authorized to use whatever means in its discretion it may deem appropriate to cause said lien or suit to be removed or dismissed, and the costs thereof, together with reasonable attorneys' fees, will be immediately due and payable by the Contractor or may, at the City's option, be offset against any sums due and payable to Contractor pursuant to this Agreement. In the event a suit on such claim or lien is brought, the Contractor will, at the option of the City, defend said suit at its own cost and expense, with counsel satisfactory to the City and will pay and satisfy any such claim, lien, or judgment as may be established by the decision of the Court in such suit. The Contractor may litigate any such lien or suit, provided the Contractor causes the effect thereof to be removed promptly in advance from the City's property.

c. This indemnity coverage shall also cover the City's defense costs in the event that the City, in its sole discretion, elects to provide its own defense. The City retains the right to disapprove counsel, if any, selected by the Contractor to fulfill the foregoing defense indemnity obligation, which right of disapproval shall not be unreasonably exercised. Insurance coverage requirements specified herein shall in no way lessen or limit the liability of the Contractor under the terms of this indemnification obligation. The Contractor shall obtain, at its own expense, any additional insurance that it deems necessary for the City's protection in the performance of this Agreement. This

defense and indemnification obligation shall survive the expiration or termination of this Agreement.

16. ASSIGNMENT. The Contractor shall not assign this Agreement or parts thereof, or its respective duties, without the express written consent of the City. Any attempted assignment, delegation or subcontracting of this Agreement in whole or in part with respect to which the City has not consented, in writing, shall be null and void and of no effect whatsoever.

17. SUB-CONTRACTORS. The Contractor is solely and fully responsible to the City for the performance of all Services under this Agreement, whether performed by the Contractor or a subcontractor engaged by the Contractor. The Contractor shall not subcontract any Services without prior written approval by the City. The Contractor agrees that each and every agreement of the Contractor with any subcontractor to perform Services under this Agreement shall contain an indemnification provision identical to the one contained herein holding the City harmless for the acts of the subcontractor. The Contractor further agrees that any such subcontract shall be terminable for cause or convenience and that, unless directed otherwise by the City, the Contractor shall immediately terminate all such subcontracts immediately upon termination of this Agreement. Prior to commencing any Services, a subcontractor shall provide evidence of insurance coverage to the City. The Contractor further agrees that all such subcontracts shall provide that they may be terminated immediately without further cost upon termination of this Agreement. Neither the City's approval of any subcontractors, suppliers or materialmen, nor the failure of performance thereof by such parties, will relieve, release or affect in any manner any of the Contractor's duties, liabilities or obligations under this Agreement, and the Contractor will at all times be and remain fully liable. The Contractor agrees that each of its employees, and any subcontractors, suppliers and materialmen will be properly qualified and will use reasonable care in the performance of their duties.

18. TERMINATION. This Agreement may be terminated for cause or for convenience by the Contractor upon delivery of forty-five (45) days prior written notice to the City and by the City by giving the Contractor ten (10) days prior written notice. Such notice shall not be required for automatic expiration under Section 2 hereof. If this Agreement is terminated, the Contractor shall be paid for all the Services satisfactorily performed prior to the designated termination date, including reimbursable expenses due. Said payment shall be made in the normal course of business. Should either Party to this Agreement be declared bankrupt, make a general assignment for the benefit of creditors or commit a substantial and material breach of this Agreement in the view of the other Party, said other Party shall be excused from rendering or accepting any further performance under this Agreement. In the event of termination by either Party hereto, the Contractor shall cooperate with the City to ensure a timely and efficient transition of all work and work product to the City or its designees. Such transition shall be complete and all time, fees and costs associated with such transition shall not be billed by the Contractor to the City.

19. DEFAULT. If either Party fails to perform in accordance with the terms, covenants and conditions of this Agreement, or is otherwise in default of any of the terms of this Agreement, the non-defaulting party shall deliver written notice to the defaulting party of the default, at the address specified in Section 20 below, and the defaulting party will have fifteen (15) days from and after receipt of the notice to cure the default. If the default is not of a type which can be cured within such fifteen (15)-day period and the defaulting party gives written notice to the non-defaulting party within such fifteen (15)-day period that it is actively and diligently pursuing a cure, the defaulting party will have a reasonable period of time given the nature of the default following the end of the 15-day period to cure the default, provided that the defaulting party is at all times within the additional time period actively and diligently pursuing the cure. If any default under this Agreement is not cured as described above, the non-defaulting party will, in addition to any other legal or equitable remedy, have the right to terminate this Agreement and enforce the defaulting party's obligations pursuant to this Agreement by an action for injunction or specific performance.

20. NOTICES. Any notice or communication required under this Agreement must be in writing, and may be given personally, sent via nationally recognized overnight carrier service, or by registered or certified mail, return receipt requested. If given by registered or certified mail, the same will be deemed to have been given and received on the first to occur of (i) actual receipt by any of the addressees designated below as the party to whom notices are to be sent, or (ii) three days after a registered or certified letter containing such notice, properly addressed, with postage prepaid, is deposited in the United States mail. If personally delivered or sent via nationally recognized overnight carrier service, a notice will be deemed to have been given and received on the first to occur of (i) one business day after being deposited with a nationally recognized overnight air courier service or (ii) delivery to the party to whom it is addressed. Any party hereto may at any time, by giving written notice to the other party hereto as provided herein designate additional persons to whom notices or communications will be given, and designate any other address in substitution of the address to which such notice or communication will be given. Such notices or communications will be given to the parties at their addresses set forth below:

To the City:

Seth Hoffman
City Manager
9220 Kimmer Drive
Suite 100
Lone Tree, CO 80124
Phone: 303-708-1818
Fax: 303-225-4949

With a copy to:

WHITE BEAR ANKELE TANAKA & WALDRON
ATTORNEYS AT LAW
Attn: Neil Rutledge
2154 East Commons Avenue, Suite 2000
Centennial, Colorado 80122
Phone: 303-858-1800
Fax: 303-858-1801

Contractor:

Mark Young Construction, Inc.
Attn: David Guida
President
7200 Miller Place
Fredrick, CO 80504
Phone: 303-776-1449
Fax: 303-776-1729

21. AUDITS. The City shall have the right to audit, with reasonable notice, any of the Contractor's books and records which may be necessary to substantiate any invoices and payments under this Agreement (including, but not limited to, receipts, time sheets, payroll and personnel records) and the Contractor agrees to maintain adequate books and records for such purposes during the term of this Agreement and for a period of two (2) years thereafter and to make the same available to the City at all reasonable times and for so long thereafter as there may remain any unresolved question or dispute regarding any item pertaining thereto.

22. ENTIRE AGREEMENT. This Agreement constitutes the entire Agreement between the Parties hereto relating to the Services, and sets forth the rights, duties, and obligations of each to the other as of this date. Any prior agreements, promises, negotiations, or representations not expressly set forth in this Agreement are of no force and effect. This Agreement may not be modified except by a writing executed by both the Contractor and the City.

23. BINDING AGREEMENT. This Agreement shall inure to and be binding on the heirs, executors, administrators, successors, and assigns of the Parties hereto.

24. NO WAIVER. No waiver of any of the provisions of this Agreement shall be deemed to constitute a waiver of any other of the provisions of this Agreement, nor shall such waiver constitute a continuing waiver unless otherwise expressly provided herein, nor shall the waiver of any default be deemed a waiver of any subsequent default.

25. GOVERNING LAW / DISPUTES. The parties shall make every attempt to resolve their differences in an amicable manner. In the event of litigation arising out of or in connection with this Agreement between the parties hereto, this Agreement and all claims or controversies arising out of or relating to this Agreement shall be governed and construed in accordance with the law of the State of Colorado, without regard to conflict of

law principles that would result in the application of any law other than the law of the State of Colorado. Venue for all actions arising from this Agreement shall be in the District Court in and for Douglas County. The Parties expressly and irrevocably waive any objections or rights which may affect venue of any such action, including, but not limited to, *forum non-conveniens* or otherwise. At the City's request, the Contractor shall carry on its duties and obligations under this Agreement during any legal proceedings and the City shall continue to pay for the Services performed under this Agreement until and unless this Agreement is otherwise terminated. In the event of any litigation between the City and the Contractor to enforce any provision of this Agreement or any right of either Party hereto, the Parties agree that the court shall award costs and expenses to the prevailing Party, such costs and expenses to include reasonable attorneys' fees. Otherwise, each Party shall pay its own costs and fees for litigation. At the City's request, the Contractor will consent to being joined in litigation between the City and third parties, but such consent shall not be construed as an admission of fault or liability. The Contractor shall not be responsible for delays in the performance of the Services caused by factors beyond its reasonable control including delays caused by Act of God, accidents, failure of any governmental or other regulatory authority to act in a timely manner or failure of the City to furnish timely information or to approve or disapprove of Contractor's Services in a timely manner.

26. GOOD FAITH OF PARTIES. In the performance of this Agreement, or in considering any requested approval, acceptance, or extension of time, the Parties agree that each will act in good faith and will not act unreasonably, arbitrarily, capriciously, or unreasonably withhold, condition, or delay any approval, acceptance, or extension of time required or requested pursuant to this Agreement.

27. SUBJECT TO ANNUAL APPROPRIATION AND BUDGET. The City does not intend hereby to create a multiple-fiscal year direct or indirect debt or other financial obligation whatsoever. The performance of those obligations of the City pursuant to this Agreement requiring budgeting and appropriation of funds are subject to annual budgeting and appropriations. The Contractor expressly understands and agrees that the City's obligations under this Agreement shall extend only to monies appropriated for the purposes of this Agreement by the City Council for the City and shall not constitute a mandatory charge, requirement or liability in any ensuing fiscal year beyond the then-current fiscal year. No provision of this Agreement shall be construed or interpreted as a delegation of governmental powers by the City, or as creating a multiple-fiscal year direct or indirect debt or other financial obligation whatsoever of the City or statutory debt limitation, including, without limitation, Article X, Section 20 or Article XI, Section 6 of the Constitution of the State of Colorado. No provision of this Agreement shall be construed to pledge or to create a lien on any class or source of City funds. The City's obligations under this Agreement exist subject to annual budgeting and appropriations, and shall remain subject to the same for the entire term of this Agreement.

28. GOVERNMENTAL IMMUNITY. Nothing in this Agreement shall be construed to waive, limit, or otherwise modify, in whole or in part, any governmental immunity that may be available by law to the City, its respective officials, employees, contractors, or agents, or any other person acting on behalf of the City and, in particular, governmental immunity

afforded or available to the City pursuant to the Colorado Governmental Immunity Act, §§ 24-10-101, *et seq*., C.R.S.

29. NEGOTIATED PROVISIONS. This Agreement shall not be construed more strictly against one Party than against the other merely by virtue of the fact that it may have been prepared by counsel for one of the Parties, it being acknowledged that each Party has contributed substantially and materially to the preparation of this Agreement.

30. SEVERABILITY. If any portion of this Agreement is declared by any court of competent jurisdiction to be void or unenforceable, such decision shall not affect the validity of any remaining portion of this Agreement, which shall remain in full force and effect. In addition, in lieu of such void or unenforceable provision, there shall automatically be added as part of this Agreement a provision similar in terms to such illegal, invalid or unenforceable provision so that the resulting reformed provision is legal, valid and enforceable.

31. NO THIRD PARTY BENEFICIARIES. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the Parties and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the Parties that any person other than Parties receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

32. OPEN RECORDS. The Parties understand that all material provided or produced under this Agreement may be subject to the Colorado Open Records Act, §§ 24-72-202, *et seq*., C.R.S. In the event of the filing of a lawsuit to compel such disclosure, the City will tender all such material for judicial determination on the issue of disclosure.

33. TAX EXEMPT STATUS. The City is exempt from Colorado State sales and use taxes. Accordingly, taxes from which the City is exempt shall not be included in any invoices submitted to the City. The City shall, upon request, furnish Contractor with a copy of its certificate of tax exemption. Contractor and subcontractors shall apply to the Colorado Department of Revenue, Sales Tax Division, for an Exemption Certificate and purchase the materials tax free. Pursuant to § 39-26-1 14(1)(a)(XIX)(A), C.R.S., Contractor and subcontractors shall be liable for exempt taxes paid due to failure to apply for Exemption Certificates or for failure to use said certificate.

34. COUNTERPART EXECUTION. This Agreement may be executed in several counterparts, each of which may be deemed an original, but all of which together shall constitute one and the same instrument. Executed copies hereof may be delivered by facsimile or email of a PDF document, and, upon receipt, shall be deemed originals and binding upon the signatories hereto, and shall have the full force and effect of the original for all purposes, including the rules of evidence applicable to court proceedings.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date first above written. By the signature of its representative below, each Party affirms that it has taken all necessary action to authorize said representative to execute this Agreement.

This Agreement will be effective on _____, 20____.

CITY: CITY OF LONE TREE, COLORADO	CONTRACTOR: Mark Young Construction, Inc.
Signature:_____	Signature: _____
Name: _____	Name: _____
Title: _____	Title: _____

City's Signature Page to Independent Contractor Agreement for HVAC Replacement with the City of Lone Tree

EXHIBIT A
SCOPE OF SERVICES

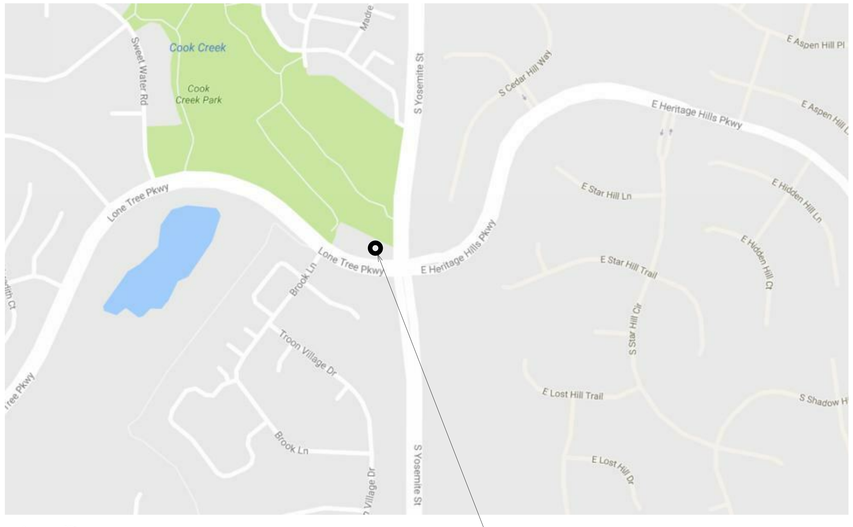
1. Lone Tree Library Remodel plans dated 2016.11.23, CD100%, provided by Barker, Rinker, Seacat.

2. Lone Tree Library Remodel, 8827 Lone Tree Parkway, Lone Tree, CO 80124, 100% Construction Documents Project Manual dated November 23, 2016.

LONE TREE LIBRARY REMODEL

8827 Lone Tree Parkway, Lone Tree CO 80124

VICINITY MAP



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SHEET LIST

Sheet Number	Sheet Name
GENERAL	
000	COVER SHEET
ARCHITECTURE	
A000	ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES
A011	CODE PLAN
A020	DEMOLITION PLAN AND RCP
A101	FLOOR PLAN AND WALL TYPES
A211	FLOOR PLAN RCP
A311	OVERALL BUILDING SECTIONS
A600	ACCESSORY SCHEDULES, ELEVATIONS AND DOOR SCHEDULE
A640	ENLARGED RECEPTION DESK AND INTERIOR ELEVATIONS
A721	PLAN DETAILS
A911	FINISH FLOOR PLAN
MECHANICAL	
M000	MECHANICAL COVER SHEET LEGEND, GENERAL NOTES AND SHEET INDEX
M020	HVAC AND PLUMBING DEMOLITION PLAN
M101	FIRST FLOOR HVAC AND PLUMBING PLAN
M700	HVAC SCHEDULES, DETAILS AND SECTIONS
ELECTRICAL	
E000	ELECTRICAL COVER SHEET
E010	EXISTING/DEMO ELECTRICAL POWER PLAN
E020	EXISTING/DEMO LIGHTING REFLECTED CEILING PLAN
E100	ELECTRICAL POWER PLAN
E200	LIGHTING REFLECTED CEILING PLAN
E600	ELECTRICAL ONE LINE DIAGRAM

ALTERNATES

ALTERNATE 1: COVER PATIO WITH CONCRETE.
ALTERNATE 2: ADD MOTORIZED SUNSHADE BETWEEN COLUMN LINES XD
ALTERNATE 3: ADD VIEWING WINDOW AT SITTING ROOM 2.
ALTERNATE 4: UPGRADE CUSTOM CASEWORK AT RECEPTION DESK
ALTERNATE 5: FIRE PLACE REMODEL. ENCLOSE WALL AROUND FIREPLACE. MOVE CONTROLS FOR FIRE PLACE TO NEW WALL. REMOVE WOOD MANTEL. REMOVE WOOD BASE AND WOOD WALL BASE ALONG FIREPLACE WALL.
ALTERNATE 6: ADD ACOUSTICAL WALL COVERING TO SOUTH WALL OF SITTING ROOM 2.
ALTERNATE 7: ADD TOILET PARTITIONS. COMPLETELY REMOVE EXISTING PARTITION AND REPLACE WITH NEW.
ALTERNATE 8: REPLACE EXTERIOR LIGHT.

BARKER RINKER SEACAT ARCHITECTURE

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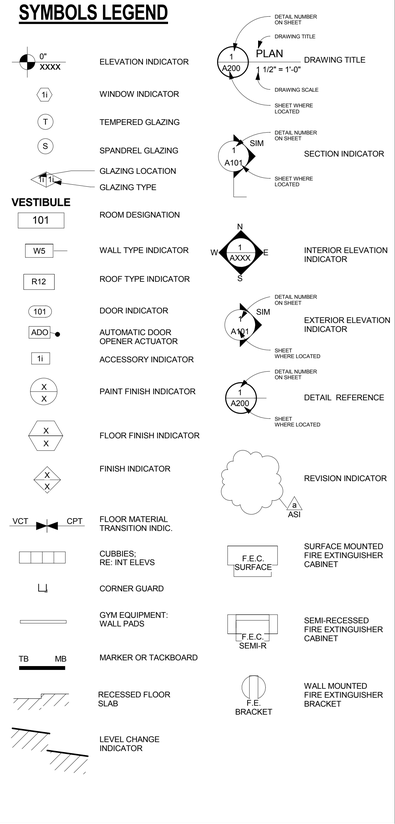
ABBREVIATIONS

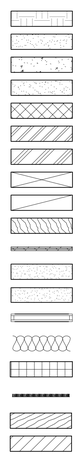
AB	ANCHOR BOLT
AC	AIR CONDITIONING
ACC	ACCESSIBLE
ACCT	ACCENT
ACOUST	ACOUSTICAL
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
ADJT	ADJACENT
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
ALT	ALTERNATE
APC	ACRYLIC PLASTER CEILING SYSTEM
APPROX	APPROXIMATE
ARCH	ARCHITECT/ARCHITECTURAL
ASPH	ASPHALT
AUTO	AUTOMATIC
AWI	AMERICAN WOODWORKING INST.
BBF	STANDARD (2X) SMALL DRAWERS OVER FILE DRAWER
BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCH MARK
BM	BEAM
B.O.	BOTTOM OF
BRG	BEARING
BSMT	BASEMENT
CAB	CABINET
CBB	CEMENTITIOUS BACKER BOARD
CFA	COMPUTER FLOOR AREA
CHNLS	CHANNELS
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMT	CERAMIC MOSAIC TILE
CMT-B	CERAMIC MOSAIC TILE BASE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CONSTR	CONSTRUCTION
COORD	COORDINATE
CPT	CARPET
CSWK	CASEWORK
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE
CTP	CERAMIC TILE PAVERS
CUH	CABINET UNIT HEATER
CWT	CERAMIC WALL TILE
D	DRYER (IN PLAN)
DBL	DOUBLE
DEMO	DEMOLISH, DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM.	DIMENSION
DISP	DISPENSER
DN	DOWN
DR	DOOR
DS	DOWN SPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
EA	EACH
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
ELEV/EL	ELEVATION
ELEV	ELEVATOR
ELEC	ELECTRICAL
ENCL	ENCLOSURE
ENGR	ENGINEERED
EPF	EPOXY POURED FLOOR
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EX	EXPOSED
EXH	EXHAUST
EXP	EXPANSION
EXP-JT	EXPANSION JOINT
EXT	EXTERIOR
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
FBGL	FIBERGLASS
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FF&E	FURNITURE, FIXTURES & EQUIPMENT
FG	FINISH GRADE
FHC	FIRE HOSE CABINET
FIN	FINISH(ED)
FIN-FLR	FINISH FLOOR
FIXT	FIXTURE
FLD	FIELD
FLR	FLOOR
FLRG	FLOORING
FO	FACE OF
FOS	FACE OF STUD
FR	FIRE RESISTIVE
FR	FRAME
FRMG	FRAMING
FRP	FIBER REINFORCED PANEL
FT	FOOT/FEET
FTG	FOOTING
FURN	FURNITURE
FUT	FUTURE
GA	GAUGE
GAL	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GHM	GALVANIZED HOLLOW METAL
GL	GLASS
GLU LAM	GLUE LAMINATED WOOD
GMGU	GLASS MESH GYPSUM UNIT
GR	GRADE
GYP BD/GWB	GYPSUM BOARD
HB	HOSE BIB
HC	HOLLOW CORE
HDBD	HARDBOARD
HDR	HEADER
HDWR	HARDWARE
HM	HOLLOW METAL
HORZ/H	HORIZONTAL
HPC	HIGH PERFORMANCE COATING
HRU	HEATING ROOFTOP UNIT
HT/H	HEIGHT
HTR	HEATER
HVAC	HEATING, VENTING & AIR CONDITIONING
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
INDIC	INDICATOR
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JT	JOINT
JST	JOIST
KD	KNOCK DOWN
KIT	KITCHEN
LAM	LAMINATE
LAV	LAVATORY
LF	LINEAR FOOT
LIN	LINOLEUM
LT	LIGHT
MAT.	MATERIAL
MANUF	MANUFACTURE
MAX	MAXIMUM
MB	MARKER BOARD
MD	METAL DECK
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MH	MANHOLE
MISC	MISCELLANEOUS
MIN	MINIMUM
MIR	MIRROR
MO	MASONRY OPENING
MTD	MOUNTED
MTG	MEETING
MTL	METAL
(N)	NEW
N	NORTH
NA	NOT APPLICABLE
NAT	NATATORIUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO.	NUMBER
NOM	NOMINAL
NON-COM	NON-COMBUSTIBLE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFC/OFF	OFFICE
OH	OVER HEAD
OPG	OPENING
OPP	OPPOSITE
OV	OVER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
PC	PRECAST CONCRETE
PCV	POLYVINYL CHLORIDE
PL	PROPERTY LINE
PL	PLATE
PLG	PLUMBING
PLAM	PLASTIC LAMINATE
PLYWD	PLYWOOD
PNL	PANEL
PR	PAIR
PREFAB	PREFABRICATED
POR	PORCELAIN TILE
PT	PAINT
PTN	PARTITION
QT	QUARRY TILE
R	RISER
RAD	RADIUS
RB	RACQUETBALL
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE:	REFER/REFERENCE
REF	REFRIGERATOR
REINF	REINFORCED
REQ	REQUIRED
RESIL	RESILIENT
REV	REVISION
RFG	ROOFING
RM	ROOM
R-NOSING	RUBBER STAIR NOSING
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTFS	RUN TRACK FLR SYSTEM
RTU	ROOF TOP UNIT
SAT	SUSPENDED ACOUSTICAL TILE
SC	SOLID CORE
SCHED	SCHEDULE
S-CONC	SEALED CONCRETE
SEAL	SEALER
SECT	SECTION
SF	SQUARE FOOT/FEET
SHT	SHEET
SHWR	SHOWER
SIM	SIMILAR
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR NATIONAL ASSOCIATION
SPEC	SPECIFICATIONS
SPRL	SPANDREL
SQ	SQUARE
SS	SOLID SURFACE
S-STL	STAINLESS STEEL
ST	STAIN
STA	STATION
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STHG	SHEATHING
STL	STEEL
SUPPL	SUPPLIED
SUSP	SUSPENDED
STOR	STORAGE
STR	STRINGER
STRL	STRUCTURAL
STRUCT	STRUCTURE, STRUCTURAL
SYM	SYMMETRICAL
SYST	SYSTEM
T	TREAD (IN PLAN)
T	TEMPERED (ON WINDOW)
TB	TACK BOARD
TBB	TILE BACKER BOARD
TBD	TO BE DETERMINED
T&B	TOP & BOTTOM
TC	TOP OF CURB
T&G	TONGUE & GROOVE
TEL	TELEPHONE
TEMP	TEMPERED
THK	THICKNESS
THLD	THRESHOLD
T.O.	TOP OF
T.O. B	TOP OF BEAM
T.O. C	TOP OF CONCRETE
T.O. F	TOP OF FLR/FOOTING
T.O. M	TOP OF MASONRY
T.O. S	TOP OF SLAB
T.O. STL	TOP OF STEEL
TS	TUBE STEEL
TV	TELEVISION
TYP	TYPICAL
TYPE 'X'	FIRE RATED GYPSUM BOARD
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITER'S LABORATORY
UNFIN	UNFINISHED
UON	UNLESS OTHERWISE NOTED
VAR	VARIES
VNR	VENEER
VERT/V	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VOC	VOLATILE ORGANIC COMPOUND
W	WASHER (IN PLAN)
W	WIRE GLASS (ON WINDOW)
W/	WITH
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WH	WATER HEATER
WI	WROUGHT IRON
W/O	WITHOUT
WP	WATERPROOF
WR	WATER RESISTANT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
∠	ANGLE
[	CHANNEL
,0 or "	DIAMETER
PL	PLATE
@	AT
X	BY
&	AND
#	POUND OR NUMBER
+/-	PLUS OR MINUS
'	FEET
"	INCHES
()	QUANTITY

REFER TO CONSTRUCTION SPECIFICATION INSTITUTE, UNIFORM DRAWING SYSTEM AND TO PROJECT SPECIFICATIONS FOR REFERENCE STANDARDS & ADDITIONAL ABBREVIATIONS

SYMBOLS LEGEND



MATERIALS LEGEND



GENERAL NOTES

GENERAL REQUIREMENTS

1. ATTENTION ALL USERS OF THESE DRAWINGS, GENERAL CONTRACTORS, SUB-CONTRACTORS, MANUFACTURERS, SUPPLIERS: CAREFULLY AND THOROUGHLY REVIEW THESE GENERAL NOTES. IT IS YOUR RESPONSIBILITY TO KNOW AND ADHERE TO THESE REQUIREMENTS.

2. THE DRAWINGS AND SPECIFICATIONS ARE SEPARATED INTO DISCIPLINES FOR THE CONVENIENCE OF THE ARCHITECT AND THE CONTRACTOR. THE SEPARATIONS USED HEREIN ARE USED ONLY FOR THE PURPOSES OF CONVENIENCE AND REFERENCE, AND IN NO WAY DO THEY DEFINE OR LIMIT THE SCOPE OR INTENT OF ANY PART OF THE DRAWINGS, OR OF THE DRAWINGS AND SPECIFICATIONS AS A WHOLE. THE FACT THAT THE DRAWINGS ARE SEPARATED IN NO WAY SUGGESTS THAT THE WORK IS NOT TO BE CONSTRUCTED AS A COMPLETE, INTEGRATED AND UNIFIED WHOLE.

3. EVERY EFFORT HAS BEEN MADE TO MAKE THESE DOCUMENTS CONCISE AND COORDINATED, TO DEFINE WORK IN THE MOST LOGICAL PLACE AND TO ELIMINATE REDUNDANCY. DO NOT PRESUME THAT YOUR SCOPE OF WORK IS SINGULARLY DEFINED. YOUR SCOPE OF WORK IS DEFINED THROUGHOUT THE ENTIRE SET OF DRAWINGS AND SPECIFICATIONS AND IS NOT CONTAINED IN JUST ONE SERIES OF DRAWINGS OR DIVISION OF SPECIFICATIONS. YOU MUST REVIEW THE ENTIRE SET OF CONTRACT DOCUMENTS TO DETERMINE YOUR SCOPE OF WORK.

4. THE DRAWINGS AND SPECIFICATIONS, INCLUDING DRAWINGS PREPARED BY SPECIFIC ENGINEERING DISCIPLINES (SUCH AS CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.) ARE COMPLEMENTARY; ITEMS SHOWN IN ANY ONE LOCATION IN THE DRAWINGS SHALL BE CONSIDERED TO BE REQUIREMENTS OF THE CONTRACT FOR CONSTRUCTION. IN THE EVENT OF AN INCONSISTENCY BETWEEN THE DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT, THE CONTRACTOR SHALL SEEK CLARIFICATION OR INTERPRETATION FROM THE ARCHITECT PRIOR TO BIDDING. WHERE INCONSISTENCIES ARE NOT CLARIFIED PRIOR TO BIDDING, AND WHERE THE ACTUAL SOLUTION OR INTENT CANNOT BE REASONABLY INFERRED, THE CONTRACTOR SHALL PROVIDE THE BETTER QUALITY OR GREATER QUANTITY OF WORK.

5. MECHANICAL AND ELECTRICAL DRAWINGS SHOW INFORMATION IN A DIAGRAMMATIC FASHION WITHOUT DIMENSIONING. THE GENERAL CONTRACTOR IS TO COORDINATE THE LOCATIONS OF ALL M.E. EQUIPMENT WITH RESPECT TO THE ARCHITECTURAL AND STRUCTURAL DETAILING OF SHAFTS, CHASES, AND SUCH.

6. THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL VISIT THE SITE AND BECOME FAMILIAR WITH SITE CONDITIONS AS THEY MAY AFFECT CARRYING OUT THE WORK AS DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT, AND NOTIFY THE ARCHITECT OF ANY CONDITIONS THAT REQUIRE MODIFICATION BEFORE PROCEEDING WITH THE WORK.

7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITY LINES. LOCATIONS SHOWN ARE APPROXIMATE. REPAIR ALL DAMAGE TO UTILITY LINES CAUSED BY CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.

8 ALL PERSONS DIRECTLY OR INDIRECTLY ASSOCIATED WITH THE PROJECT SHALL BE FAMILIAR WITH THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT, AND IMPLEMENT THOSE RULES AS THEY APPLY TO THIS PROJECT.

9. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, LABOR, AND SERVICES NECESSARY TO COMPLETE THE WORK.

10. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE BUILDING CODE & LOCAL AMENDMENTS. RE: A010.

11. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL TRADES AND THE PREVENTION OF CONFLICT BETWEEN ALL TRADES.

12. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL CONDUCT A WALK THROUGH INSPECTION WITH THE OWNER TO DETERMINE IN WRITING THE CONDITION OF THE WORK ALREADY IN PLACE. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING EQUIPMENT PRESENTLY IN PLACE THAT IS DAMAGED DURING CONSTRUCTION.

13. CONTRACTOR SHALL SUBMIT CONFIRMATION OF ORDERED MATERIALS OR ITEMS NECESSARY TO COMPLETE THE PROJECT WITH PROJECTED DELIVERY DATE GREATER THAN FOUR WEEKS.

14 ALL SUB-CONTRACTORS SHALL SUBMIT SHOP DRAWINGS AS REQUIRED FOR ARCHITECTS APPROVAL PRIOR TO COMMENCING ANY WORK.

15. SEAL AROUND ALL PENETRATIONS THROUGH EXISTING AND PROPOSED FIRE RATED PARTITIONS. PROVIDE UL APPROVED FIRESTOP SYSTEM TO MEET REQUIRED RATING.

DRAWINGS AND DIMENSIONS

1. DO NOT SCALE THE DRAWINGS.

2. ALL DIMENSIONS ON PLANS ARE TO FACE OF BLOCK OR TO FACE OF STUD UNLESS NOTED OTHERWISE. ALL DIMENSIONS OFF OF EXISTING WALLS ARE FROM FACE OF EXISTING WALL.

3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT IMMEDIATELY SHOULD ANY DISCREPANCIES BE FOUND IN THE DRAWINGS AND SPECIFICATIONS.

4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL FIELD CONDITIONS AND DIMENSIONS AS THEY RELATE TO THIS PROJECT. SHOULD DISCREPANCIES EXIST BETWEEN THE WORK INDICATED AND ACTUAL FIELD CONDITIONS NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

5. ACTUAL CONTRACT LIMITS ARE TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE OWNER BEFORE ACTUAL CONSTRUCTION WORK BEGINS. ANY INDICATION OF PROJECT LIMITS OR LINES OF DEMARCATION ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, AND ARE NOT TO BE TAKEN LITERALLY.

6. SEE GENERAL NOTES ON ALL 'A' SERIES DRAWINGS FOR INFORMATION RELATED TO PLANS AND DETAILS ON THOSE SHEETS.

7. THE TERM "ALIGN" REFERS TO LOCATING DIFFERENT COMPONENTS OF CONSTRUCTION TO PROVIDE A FLUSH FINISH SURFACE.

8. CONTRACTORS AND ALL SUB-CONTRACTORS SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION AND/OR ORDERING OF MATERIALS.

9. USE OF THE WORD "VERIFY" POINTS OUT A SITUATION WHICH MUST BE CONFIRMED PRIOR TO PROCEEDING WITH THE WORK, FABRICATION OF EQUIPMENT, OR ORDERING MATERIAL. NOTIFY THE ARCHITECT OF ANY DISCREPANCY.

10. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF ALL CEILING FIXTURES. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR COMPLETE CONSTRUCTION REQUIREMENTS.

11. ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS SHOW WHERE EXPOSED DUCTWORK IS TO BE INSTALLED AT A SPECIFIC ELEVATION IN A CONTROLLED PATTERN. THE CONTRACTOR MUST RELY ON ALL OF THESE DISCIPLINES TO COMPLETE THE WORK AND SHOULD NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

12. THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES INSTALLING THEIR RESPECTIVE EQUIPMENT IN THE CEILING PLENUMS. MECHANICAL, ELECTRICAL, STRUCTURAL, AND FIRE SPRINKLER SYSTEMS ALL SHARE THIS SAME SPACE. EACH SUB CONTRACTOR IS TO REVIEW THE REQUIREMENTS OF THEIR WORK WITH THE AWARENESS OF THE OTHER TRADES THAT NEED TO SHARE THESE SPACES AND MUST NOT ASSUME THAT THEIR INSTALLATION HAS BEEN CONSIDERED IN THE DESIGN AND SHOP DRAWINGS OF THE OTHER TRADES.

13. ALL DOORS TO BE LOCATED 4" OFF ADJACENT CMU OR METAL STUD WALL UNLESS DIMENSIONED OTHERWISE ON THE PLAN.

PARTITION NOTES

1. PROVIDE AND INSTALL ALL BLOCKING STIFFENERS, BRACING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK AND OF ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL AND ELECTRICAL EQUIPMENT.

2. COORDINATE METAL STUD GAUGE WITH PRE-APPROVED EQUIPMENT ANCHORAGE. WHERE A DISCREPANCY OCCURS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

3. THERE SHALL BE NO BACK-TO-BACK ELECTRICAL TELEPHONE, OR OTHER OUTLETS, EXCEPT WHERE SPECIFICALLY SHOWN

4. PROVIDE ACOUSTIC (SOUND) SEALANT AT NON-RATED WALLS AND FIRE-RATED SEALANT AT SMOKE PARTITION AND AS REQUIRED BY TEST NUMBER

CONSTRUCTION NOTES

1. DRAWINGS ARE PREPARED USING DIMENSIONS AND PRODUCT CONFIGURATIONS OR DETAILS OF SPECIFIC MANUFACTURERS (TYPICALLY THE FIRST MANUFACTURER LISTED UNDER "ACCEPTABLE MANUFACTURERS" IN THE SPECIFICATIONS). DIMENSIONS AND DETAILS FOR SPECIFIC PRODUCTS MAY CHANGE BEFORE THEY ARE ACTUALLY INCORPORATED INTO THE WORK, AND PRODUCTS BY OTHER MANUFACTURERS MAY ALSO BE ACCEPTABLE. THEREFORE, ACTUAL INSTALLATION DETAILS AND DIMENSIONS MAY DIFFER FROM THOSE SHOWN. CONTRACTOR SHALL VERIFY INSTALLATION REQUIREMENTS FOR ALL PRODUCTS TO BE INCORPORATED IN THE WORK (INCLUDING PARTITION THICKNESS FOR RECESSED OR SEMI-RECESSED PRODUCTS), AND IS RESPONSIBLE FOR ACCOMMODATING AND COORDINATING CHANGES TO OTHER MATERIALS OR PRODUCTS THAT ARE NECESSARY BECAUSE OF THESE DIFFERENCES.

2. PROVIDE SOLID BLOCKING WITHIN PARTITIONS AT ALL LOCATIONS WHERE ITEMS WILL BE MOUNTED ON PARTITIONS INCLUDING, BUT NOT LIMITED TO: ACCESSORIES, CASEWORK TRIM, FLASHING, WALL MOUNTED EQUIPMENT, TACK/BULLETIN/MARKER BOARDS, ETC.

3. ALL WOOD BLOCKING SHALL BE FIRE-RETARDANT WOOD.

4. MAINTAIN RATING AT ALL BLOCKOUTS FOR ALL FIRE EXTINGUISHERS AND TOILET ACCESSORIES THAT ARE TO BE INSTALLED IN RATED WALLS.

5. PROVIDE GYPSUM BOARD CONTROL JOINTS IN PARTITIONS AND CEILINGS AT 30'-0" MAX SPACING. COORDINATE TO MEET FIRE RESISTIVE RATINGS OF THE ASSEMBLY, FIRESTOP JOINTS AT RATED PARTITIONS. SUB-CONTRACTOR MUST PROVIDE A SUBMITTAL FOR JOINT MATERIAL.

6. CAULK ALL JOINTS OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EACH OTHER AND WHERE THE INTERSECTION IS EXPOSED TO VIEW, UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

7. FIREBLOCK ALL CONCEALED SPACES, SOFFITS, SHAFTS, CHASES AND CEILING AREAS PER REQUIREMENTS OF THE 2006 IBC AND THE LOCAL JURISDICTION'S AMENDMENTS.

8. PROVIDE CONTINUOUS PERIMETER BUILDING INSULATION AT ALL EXTERIOR WALLS FROM SLAB TO ROOF DECK.

9. THE ARCHITECTURAL AND STRUCTURAL DRAWINGS BOTH DESCRIBE VARIOUS FLOOR SLAB SLOPE REQUIREMENTS, RECESSES, AND EDGE CONDITIONS. USE BOTH SETS OF DRAWINGS WHEN INSTALLING THE FLOOR SLAB.

10. ASSUME LEVEL 4 FINISH FOR ALL GYPSUM BOARD PARTITIONS, UNLESS NOTED OTHERWISE.

11. IT IS THE INTENT OF THE DESIGN THAT ALL METAL STUD PARTITIONS BE OF SUFFICIENT WIDTH TO ADEQUATELY ENCLOSE PIPING, CONDUITS, AND RECESSED EQUIPMENT. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WITH THIS INTENT.

12. ALL VERTICAL AND HORIZONTAL PIPES, CONDUITS, DUCTS, ETC. IN FINISHED ROOMS OR AREAS THROUGHOUT THE BUILDING SHALL BE FURRED IN TO MATCH THE ROOM FINISH, UNLESS OTHERWISE NOTED.

13. WHERE MECHANICAL WORK PENETRATES ANY COMPONENT OF A FIRE-RATED ASSEMBLY, PROVIDE THE APPROPRIATE FIRE AND/OR SMOKE DAMPERS. IF IT IS NOT CLEAR WHETHER DUCTWORK PENETRATES A PORTION OF THE RATED ASSEMBLY, OBTAIN CLARIFICATION FROM THE ARCHITECT PRIOR TO BIDDING. SEAL AROUND ALL PENETRATIONS THROUGH PROPOSED FIRE RATED PARTITIONS. PROVIDE UL APPROVED FIRESTOP SYSTEM TO MEET REQUIRED RATING.

14. THE FIRE SPRINKLER SYSTEM WILL BE DESIGNED BY THE INSTALLING SUB-CONTRACTOR. THE GENERAL CONTRACTOR SHALL COORDINATE LAYOUT, CLEARANCES, AND LOCATION OF HEAD HEIGHTS WITH THE STRUCTURE, MECHANICAL DUCTWORK, ELECTRICAL LIGHTING, DRAINAGE PIPING, AND THE ARCHITECTURAL REFLECTED CEILING PLANS. THE SPRINKLER DESIGN MUST BE COORDINATED WITH THE PROVISIONS OF ALL ENGINEERING AND ARCHITECTURAL DOCUMENTS AND SHOULD NOT RELY SOLELY ON ONE SERIES OF DRAWINGS OR ONE DISCIPLINE. CONTRACTOR SHALL ADJUST OR ADD FIRE SPRINKLER HEADS TO ACCOMMODATE PARTITION LAYOUT. HEAD SPACING AND PLACEMENT SHALL MEET CODE REQUIREMENTS. SUB-CONTRACTOR SHALL COORDINATE ANY SPRINKLER HEAD LAYOUT CONFLICTS WITH THE ARCHITECT.

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LONE TREE LIBRARY REMODEL
8827 Lone Tree Parkway, Lone Tree CO 80124

STATE OF COLORADO
DAVID S. HAMMEL
B-1468
11/23/16
LICENSED ARCHITECT

Project Number:	2016.027.01
Issue:	100% CD
Date:	2016.11.23
Drawn By:	PC
Checked By:	JG

Revisions:

Description Date:

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ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES

A000

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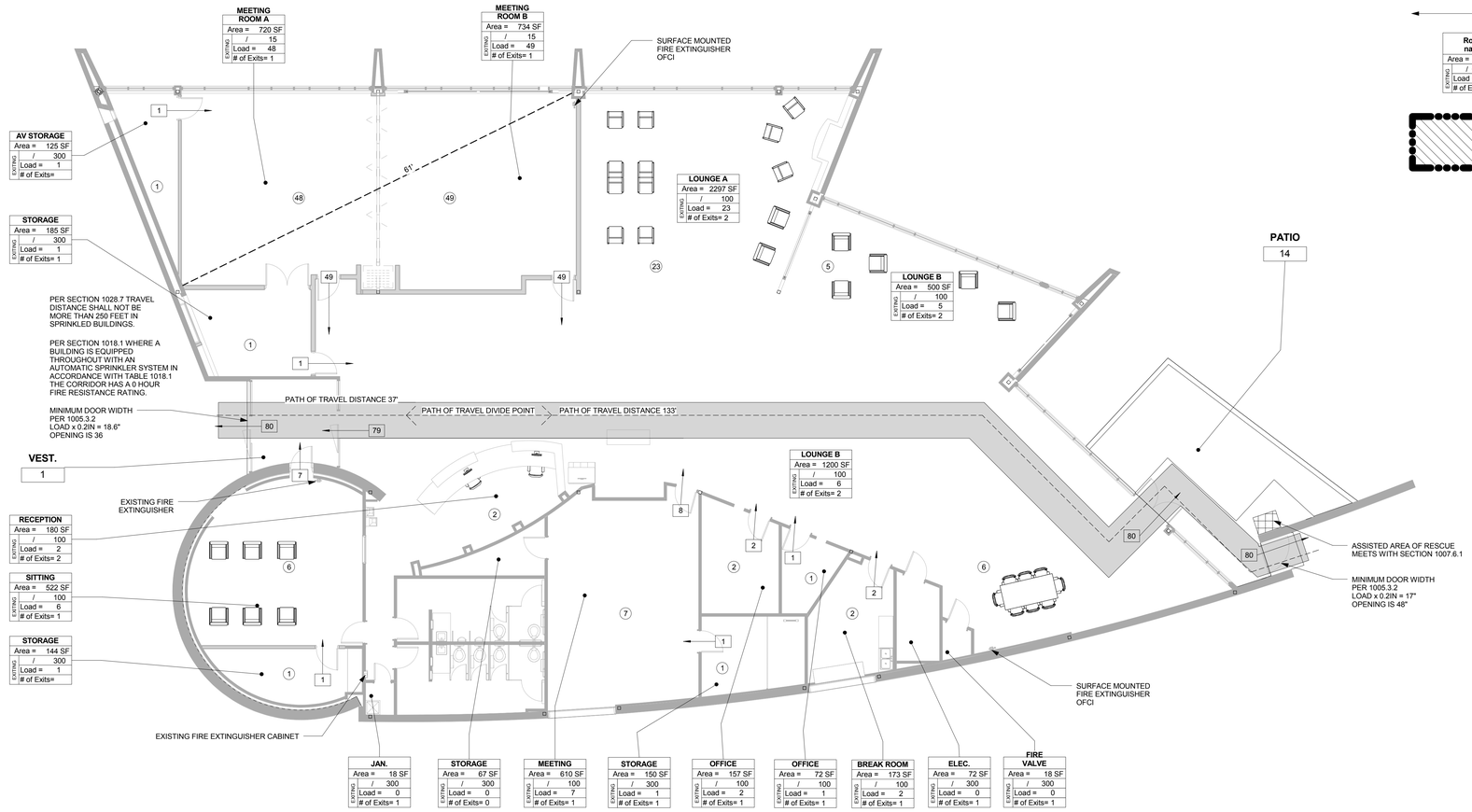

1 A011 FIRST FLOOR CODE PLAN
1/8" = 1'-0"

KEY LEGEND

- 1 HOUR RATED WALL
- 2 HOUR RATED WALL
- 23 — EXITING LOAD AND DIRECTION OF TRAVEL
- Room name: Area = 150 SF; EXITING / O.L.F. 15; Load = 10; # of Exits= 1 — LOAD FACTOR, EXIT LOAD, NUMBER OF EXITS REQUIRED
- RESIST THE PASSAGE OF SMOKE PER 508.2.2.1 AND TABLE 508.2
- PANIC HARDWARE
- ALARMED PANIC HARDWARE

Project Name: Lone Tree Library Remodel

Project Location:8827 Lone Tree Parkway, Lone Tree CO 80124
By: BRS Architecture

Codes of jurisdiction:
· 2012 International Building Code
· 2014 National Electric Code
· 2012 International Plumbing Code
· 2012 International Mechanical Code
· 2012 International Fire/Life Safety Code
· 2009 International Energy Code
· 2012 International Fuel & Gas Code
· NFPA Fire Codes (Vol. 1-16)
· ICC/ANSI A117.1-1998 Accessibility Standards

Project Data Summary

Stories: One Story

Building Area: Main Level - 10,333 S.F.
Total - 10,333

Total Occupant Load: 160

Type of Construction: V- B (sprinkled)

Occupancy Classification: A-3, B (Business)

USE GROUPS

City of Lone Tree Zoning Code

Setbacks:
Abutting a street: Reginal/major arterial - 50 ft
Minor arterial - 40 ft
Adjoining: Residential 50ft

Building Height: 40ft
All roof mounted equipment shall be properly screened, with the exception of solar collectors/heaters

Section 504 Height

ALLOWABLE HEIGHT and AREA MODIFICATIONS
(Type V B; Table 503/ Section 504.2)

504.2 Automatic sprinkler system increase
Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the value specified in Table 503 for maximum height is increased by 20 ft and maximum number of stories is increased by one. These increases are permitted in addition to the area increase in accordance with Sections 506.2 and 506.3.

BUILDING AREA:

Main Level: 10,333 SF

Total Building SF: 10,333SF

506.5 Mixed Occupancy Area Determination
The total allowable building area for buildings containing mixed occupancies shall be determined in accordance with the applicable provisions of this section. A single basement need not be included in the total allowable building area, provided such basement does not exceed the area permitted for a building with no more than one story above grade plane.

508.3.2 - Allowable Area and Height
The allowable area and height of the building or portion thereof shall be based on the most restrictive allowances for the occupancy groups under consideration for the type of construction of the building in accordance with Section 503.1

508.3.3 - Separation
No separation is required between occupancies.

TYPES of CONSTRUCTION:

Table 601
Building Element V B
Structural frame including columns, girders, and truss: 0
Bearing Walls -Exterior: 0
Bearing walls - interior: 0
Exterior Non Bearing Walls - 0
Interior Non Bearing Walls - 0
Floor Construction - ceiling/floors: (including supporting beams and joists) - 0
Roof Construction - ceiling/roofs: (including supporting beams and joists) - 0(c)

Table 602
Per Table 602, the fire-resistance rating for exterior walls based on separation shall be:
Separation 10 ft < X > 30 ft = 1 hours for A-3 and B

CHAPTER 10 - Means of Egress

1003.2 Ceiling Height
The Means of egress shall have a ceiling height not less than 7'-6".

1003.6 Means of Egress Continuity
The path of egress travel along a means of egress shall not be interrupted by any building element other than a means of egress component as specified in this chapter. Obstructions shall not be placed in the required width of a means of egress except projections permitted by this chapter. The required capacity of a means of egress system shall not be diminished along the path of egress travel.

1004.1 Design Occupant Load (Table 1004.1.2)
Assembly Spaces (unconcentrated): 15 net
Accessory Storage Areas, Mechanical Equipment: 300 gross
Business Areas 1/100 gross

EXIT ACCESS (Section 1014)
1015.1 Exits or exit access doorways from spaces.
Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:
The occupant load of the space exceeds one of the values in Table 1015.1.

Where a building contains mixed occupancies, each individual occupancy shall comply with the applicable requirements for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1.

1015.2.1 Two exits or exit access doorways.
Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit doors or exit access doorways. Interlocking or scissor stairs shall be counted as one exit stairway.

Exceptions: Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.

Maximum overall diagonal of the area served (Meeting Room A & B): **61'**
Separation distance of the exit doors: **32' 3"**

1014.2 Egress through intervening spaces
Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an exit.

1015.1 Exits or Exit Access Doorways From Spaces
Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:
1. The occupant load of the space exceeds one of the values in Table 1015.1.

Where a building contains mixed occupancies, each individual occupancy shall comply with the applicable requirements for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1

Spaces With One Exit or Exit Access Doorway - Table 1015.1
Occupancy A, B = Maximum Occupancy Load - 49

1016.1 Exit Access Travel Distance
Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story along the natural and unobstructed path of egress travel to an exterior door at the level of exit discharge, an entrance to a vertical exit enclosure, and exit passageway, a horizontal exit, an exterior exit stairway or an exterior exit stairway or an exterior exit ramp, shall not exceed the distances given in Table 1016.2.

Exit Access Travel Distance - Table 1016.2
Assembly A-3 occupancy (with sprinkler system): 250 feet
Business occupancy (with sprinkler system): 300 feet

1018.1 Corridors
Corridors shall be fire-resistance rated in accordance with table 1018.1. The corridor walls required to be fire-resistance rated shall comply with Section 709 for fire partitions.

Corridor Fire-Resistance Rating - Table 1018.1
Occupancy A-3 with Sprinkler System - O hr rating
Occupancy B with Sprinkler System - 0 hr rating

1018.2 Corridor Width
The minimum corridor width shall be as determined in Section 1005.1, but not less than 44 inches.

1018.4 Dead Ends
Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet in length.

1021.1 Number of Exits and Exit Configuration General
Each story and occupied roof shall have the minimum number of exits, or access to exits, as specified in this section. The required number of exits, or exit access stairways or ramps providing access to exits, from any story shall be maintained until arrival at grade or a public way. Exits or access to exits from any story shall be configured in accordance with this section. Each story above the second story of a building shall have a minimum of one interior or exterior exit stairway, or interior or exterior exit ramp. At each story above the second story that requires a minimum of three or more exits, or access to exits, a minimum of 50 percent of the required exits shall be interior or exterior exit stairways, or interior or exterior exit ramps.

1028.2 Assembly Main Exit
Group A occupancies and assembly occupancies accessory to Group E occupancies that have an occupant load of greater than 300 shall be provided with a main exit. The main exit shall be of sufficient width to accommodate not less than one-half of the occupant load, but such width shall not be less than the total required width of all means of egress leading to the exit. Where the building is classified as a Group A occupancy, the main exit shall front on at least on street or an unoccupied space not less than 10 feet in width that adjoins a street or public way.

Occupant load 296< 300;

PLUMBING CODE REVIEW
Required Fixture Summary

B, A-3

Occ.	People	WCs req. /proj.	U req. /proj.	Lavs. req. /proj.	Shws. req. /proj.	Dr. Frtns. req. /proj.
M	80	3/2	0/2	2/1	- / -	1/1
W	80	3/4	0/0	2/1	- / -	
		req. /proj.	**req./proj.**	**req. / proj.**	**req. / proj.**	**req. / proj.**
Total	**160**	**6 6**	**0 2**	**4 / 2**	**N/R 0**	**1 / 1**

B
WC Req. (M) = 1 per 25 for first 50 & 1 per 50 for remainder exceeding 50
WC Req. (W) = 1 per 25 for first 50 & 1 per 50 for remainder exceeding 50
Lavs Req. (M/W) = 1 per 40 for first 80 & 1 per 80 for remainder exceeding 80
Drinking Ftn. (project) = 1 per 100

NOTE: BASED ON PROPOSED BUILDING PROGRAMMING, THE ASSUMED AVERAGE OCCUPANT LOAD WILL BE 80 PEOPLE TOTAL. THE EXISTING SINGLE FIXTURE LAYOUTS IN EACH RESTROOM WILL MEET THE FACILITIES PROPOSED NEEDS (REFER TO BUILDING PERMIT ATTACHMENT A.)

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CODE PLAN

A011

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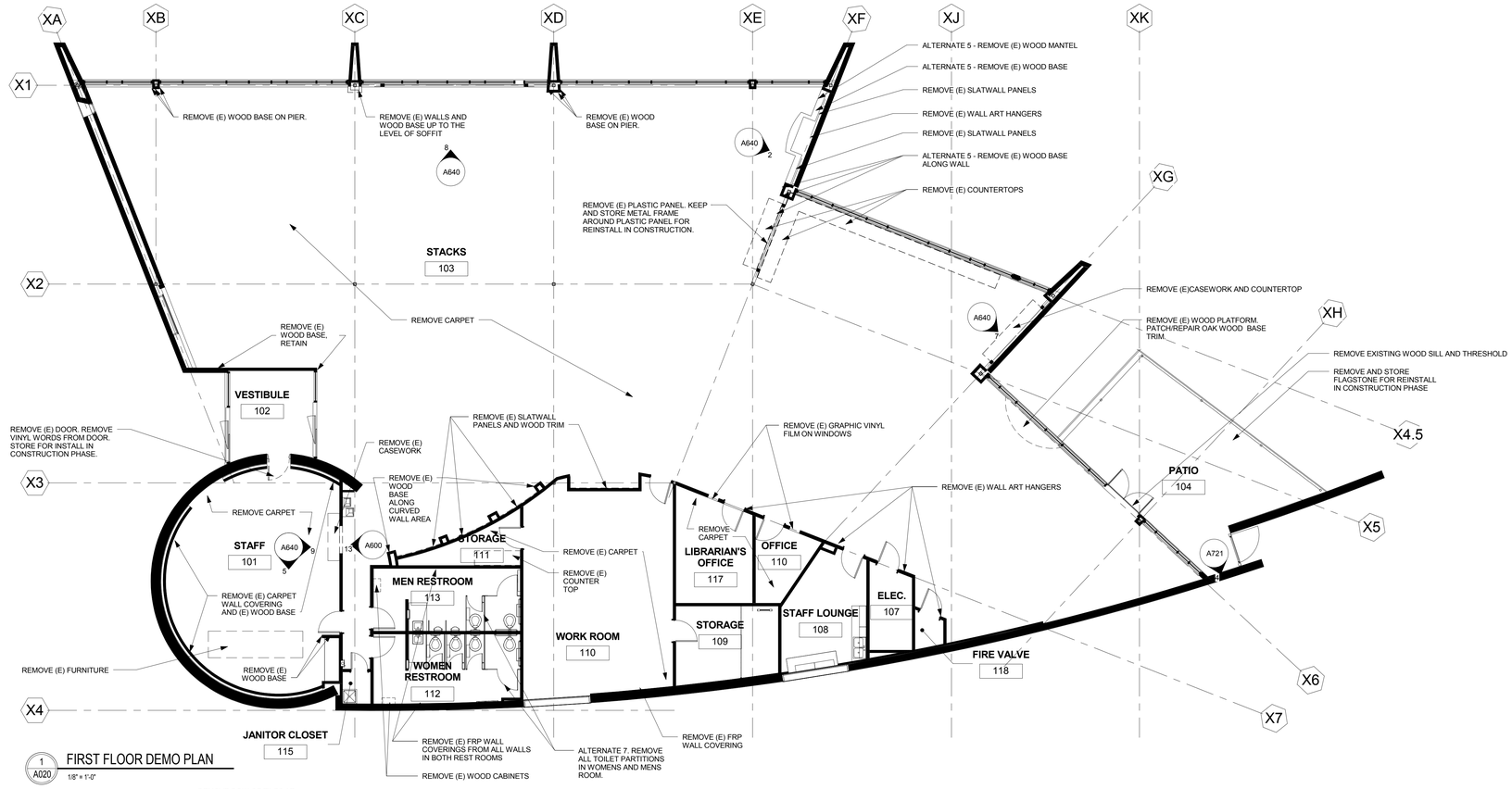
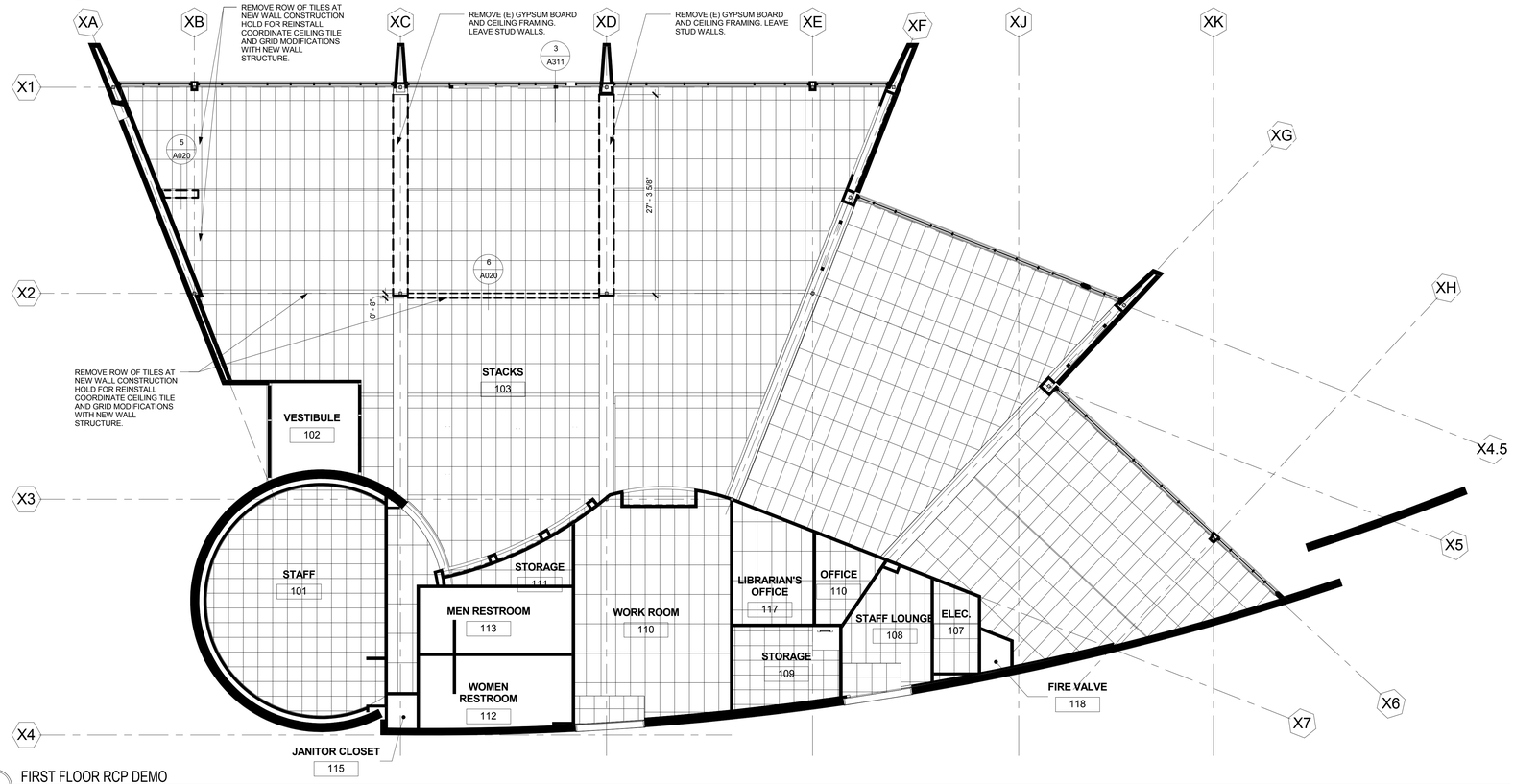


1 A020 FIRST FLOOR DEMO PLAN
1/8" = 1'-0"



4 A020 FIRST FLOOR RCP DEMO
1/8" = 1'-0"

DEMOLITION GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE ALL DEMOLITION WITH ANY PHASING REQUIRED TO COMPLETE THE WORK.

2. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY PARTITIONS AND TEMPORARY DOORS AS DEEMED NECESSARY BY THE ARCHITECT, ENGINEER AND OWNER. THEY SHALL BE WELL MAINTAINED AND ANY DAMAGE REPAIRED IMMEDIATELY TO AVOID MIGRATION OF DUST INTO ADJOINING AREAS.

3. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK IN OCCUPIED SPACES. DEMOLITION WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO MINIMIZE DISRUPTIONS TO OCCUPANTS AND SPACES TO REMAIN OCCUPIED. PROTECT EXISTING FLOOR FINISHES FROM CONSTRUCTION TRAFFIC THROUGH OCCUPIED AREAS.

4. ALL DEMOLITION SHALL BE MADE CLEAN AND COMPLETE AND IN A MANNER SUITABLE TO ACCEPT NEW FINISHES AND/OR SURFACES.

5. EXISTING WALL, FLOOR AND CEILING FINISHES TO REMAIN SHALL BE PROTECTED FROM DAMAGE DUE TO DEMOLITION WORK. WHEN DEMOLITION CAUSES DAMAGE TO FLOOR, WALL, OR CEILING SURFACES THAT WILL REMAIN EXPOSED IN THE FINISHED WORK, SUCH DAMAGE SHALL BE REPAIRED AS REQUIRED TO RECEIVE NEW FINISHES.

6. THE CONTRACTOR SHALL COVER AND PROTECT OWNER'S EQUIPMENT WHICH CANNOT BE REMOVED FROM THE PROJECT AREA.

7. REMOVE ALL EXISTING WALL MOUNTED ITEMS WITHIN THE PROJECT LIMIT AREA WHICH ARE NOT NOTED TO REMAIN. THE CONTRACTOR SHALL DISPOSE OF THESE ITEMS AFTER INSPECTION BY THE OWNER FOR FUTURE USE. IF ITEMS ARE REMOVED FROM WALLS THAT ARE TO REMAIN, THE CONTRACTOR SHALL PATCH WALLS AS REQUIRED TO RECEIVE NEW FINISHES AND SURFACES.

8. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION ACCORDING TO EACH TRADE.

9. DEMOLITION FOR BUILDING SERVICES AND UTILITIES SHALL BE PERFORMED BY THE TRADE RESPONSIBLE FOR THAT UTILITY. OPENINGS FOR DEMOLISHED UTILITIES SHALL BE INFILLED BY TRADE RESPONSIBLE FOR PIPING, DUCT OR CONDUIT DEMOLITION. OPENINGS THROUGH FIRE-RATED CONSTRUCTION SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION OR BE FIRESTOPPED.

10. WHERE EXTERIOR WALLS, DOORS AND/OR WINDOWS ARE TO BE REMOVED OR MODIFIED, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT THE EXISTING BUILDING REMAINS WEATHER-TIGHT AND WITHOUT DRAFTS.

11. REMOVE EXISTING FLOOR AND BASE MATERIALS IN ALL AREAS SCHEDULED TO RECEIVE NEW FLOOR AND BASE. REFER TO FINISH DRAWINGS OR SCHEDULES. ALL FLOOR DEMOLITION TO REFER TO 'GENERAL DEMOLITION NOTE #4'.

12. PATCH AND REPAIR ALL DAMAGED FIREPROOFING.

13. REMOVE EXISTING WOOD BASE AT LOCATIONS INDICATED ON FLOOR PLANS. SAVE FOR REINSTALL AT LOCATIONS INDICATED ON DRAWINGS.

DEMOLITION LEGEND

DASHED LINE INDICATES EXISTING ELEMENT TO BE REMOVED, RELOCATED OR MODIFIED; REFER TO NOTATION ON DRAWING

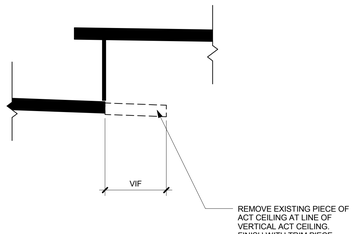
SOLID LINE INDICATES EXISTING ELEMENT TO REMAIN

EXISTING WALL TO REMAIN

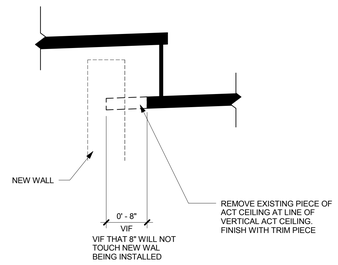
EXISTING WALL TO BE REMOVED

EXISTING DOOR TO REMAIN

EXISTING DOOR TO BE REMOVED



5 A020 DEMO ACT CEILING
1" = 1'-0"



6 A020 DEMO ACT CEILING
1" = 1'-0"

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DEMOLITION PLAN AND RCP

A020

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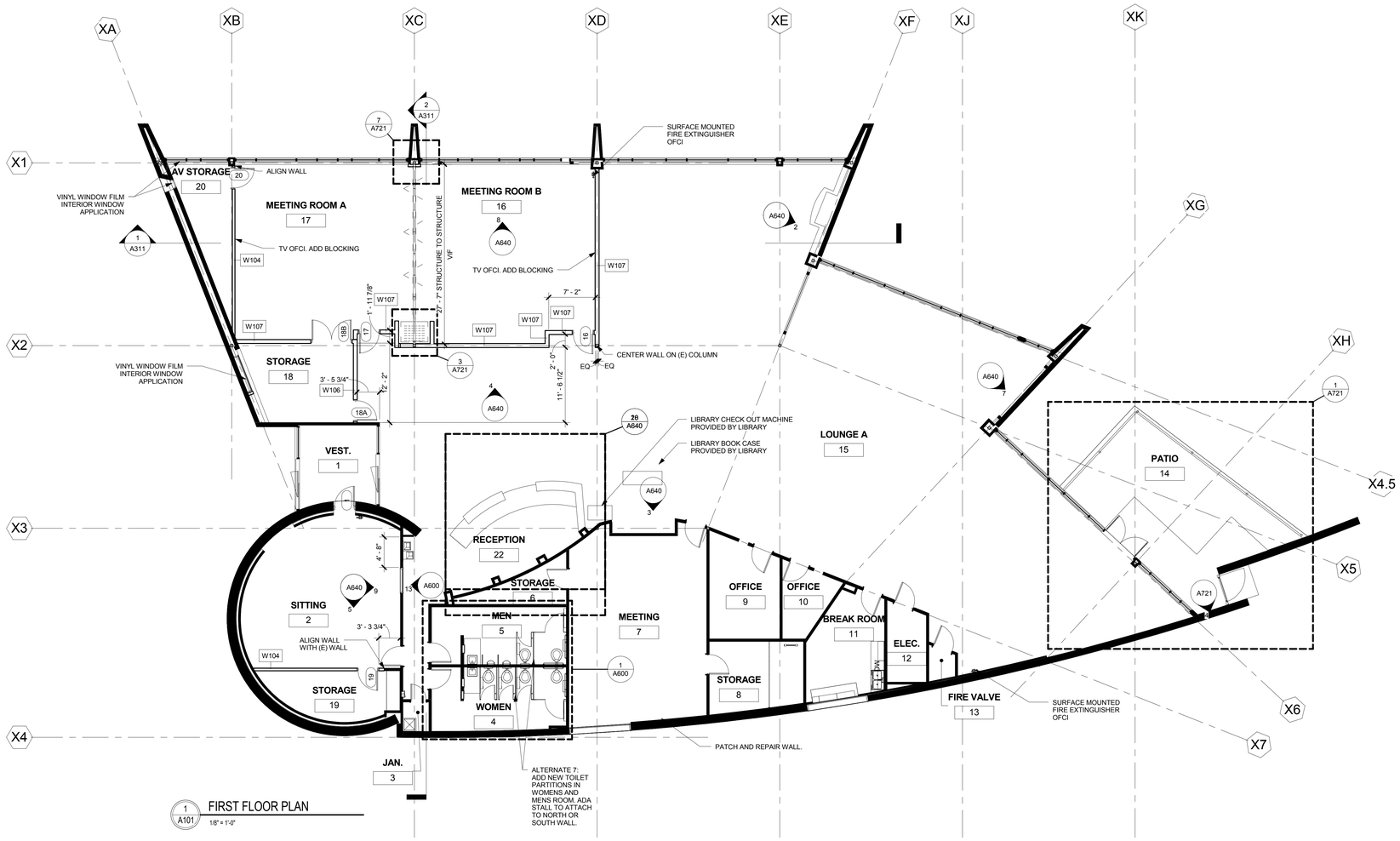


1 A101 FIRST FLOOR PLAN

1/8" = 1'-0"

WALL SYSTEMS LEGEND

NEW WALL

(E) WALLS TO REMAIN

DRAWINGS AND DIMENSIONS

1. DO NOT SCALE THE DRAWINGS.

2. ALL DIMENSIONS ON PLANS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. ALL DIMENSIONS OFF OF EXISTING WALLS ARE FROM FACE OF EXISTING WALL.

3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT IMMEDIATELY SHOULD ANY DISCREPANCIES BE FOUND IN THE DRAWINGS AND SPECIFICATIONS.

4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL FIELD CONDITIONS AND DIMENSIONS AS THEY RELATE TO THIS PROJECT. SHOULD DISCREPANCIES EXIST BETWEEN THE WORK INDICATED AND ACTUAL FIELD CONDITIONS NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

5. ACTUAL CONTRACT LIMITS ARE TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE OWNER BEFORE ACTUAL CONSTRUCTION WORK BEGINS. ANY INDICATION OF PROJECT LIMITS OR LINES OF DEMARCATION ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, AND ARE NOT TO BE TAKEN LITERALLY.

7. THE TERM "ALIGN" REFERS TO LOCATING DIFFERENT COMPONENTS OF CONSTRUCTION TO PROVIDE A FLUSH FINISH SURFACE.

6. SEE GENERAL NOTES ON ALL 'A' SERIES DRAWINGS FOR INFORMATION RELATED TO PLANS AND DETAILS ON THOSE SHEETS.

8. CONTRACTORS AND ALL SUB-CONTRACTORS SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION AND/OR ORDERING OF MATERIALS.

9. USE OF THE WORD "VERIFY" POINTS OUT A SITUATION WHICH MUST BE CONFIRMED PRIOR TO PROCEEDING WITH THE WORK, FABRICATION OF EQUIPMENT, OR ORDERING MATERIAL. NOTIFY THE ARCHITECT OF ANY DISCREPANCY.

10. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF ALL CEILING FIXTURES. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR COMPLETE CONSTRUCTION REQUIREMENTS.

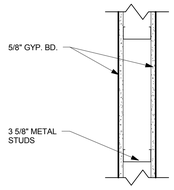
11. ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS SHOW WHERE EXPOSED DUCTWORK IS TO BE INSTALLED AT A SPECIFIC ELEVATION IN A CONTROLLED PATTERN. THE CONTRACTOR MUST RELY ON ALL OF THESE DISCIPLINES TO COMPLETE THE WORK AND SHOULD NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

12. THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES INSTALLING THEIR RESPECTIVE EQUIPMENT IN THE CEILING PLENUMS. MECHANICAL, ELECTRICAL, STRUCTURAL, AND FIRE SPRINKLER SYSTEMS ALL SHARE THIS SAME SPACE. EACH SUB CONTRACTOR IS TO REVIEW THE REQUIREMENTS OF THEIR WORK WITH THE AWARENESS OF THE OTHER TRADES THAT NEED TO SHARE THESE SPACES AND MUST NOT ASSUME THAT THEIR INSTALLATION HAS BEEN CONSIDERED IN THE DESIGN AND SHOP DRAWINGS OF THE OTHER TRADES.

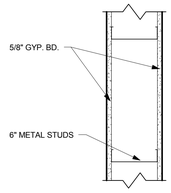
13. ALL DOORS TO BE LOCATED 4" OFF ADJACENT METAL STUD WALL UNLESS DIMENSIONED OTHERWISE ON THE PLAN.

14. PATCH AND REPAIR EXISTING GYP. BOARD AS NEEDED.

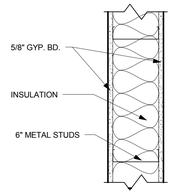
W104 3 5/8" MTL STUD WALL



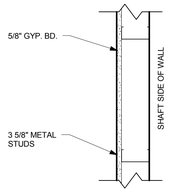
W106 6" MTL STUD WALL



W107 6" MTL STUD WALL w/ INSULATION



W113 3 5/8" MTL STUD CHASE WALL



GENERAL WALL TYPE NOTES:
1. WALL SECTIONS ARE CUT IN PLAN VIEW.
2. EXTEND FIRE RATED WALLS, INCLUDING SHEATHING, TO UNDERSIDE OF STRUCTURE ABOVE.
3. PROVIDE TYPE 'X' GYPSUM BOARD AT FIRE RATED WALLS.

2 A101 WALL TYPES

1 1/2" = 1'-0"

0 4' 8' 16'

PROJECT TRUE

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FLOOR PLAN AND WALL TYPES

A101

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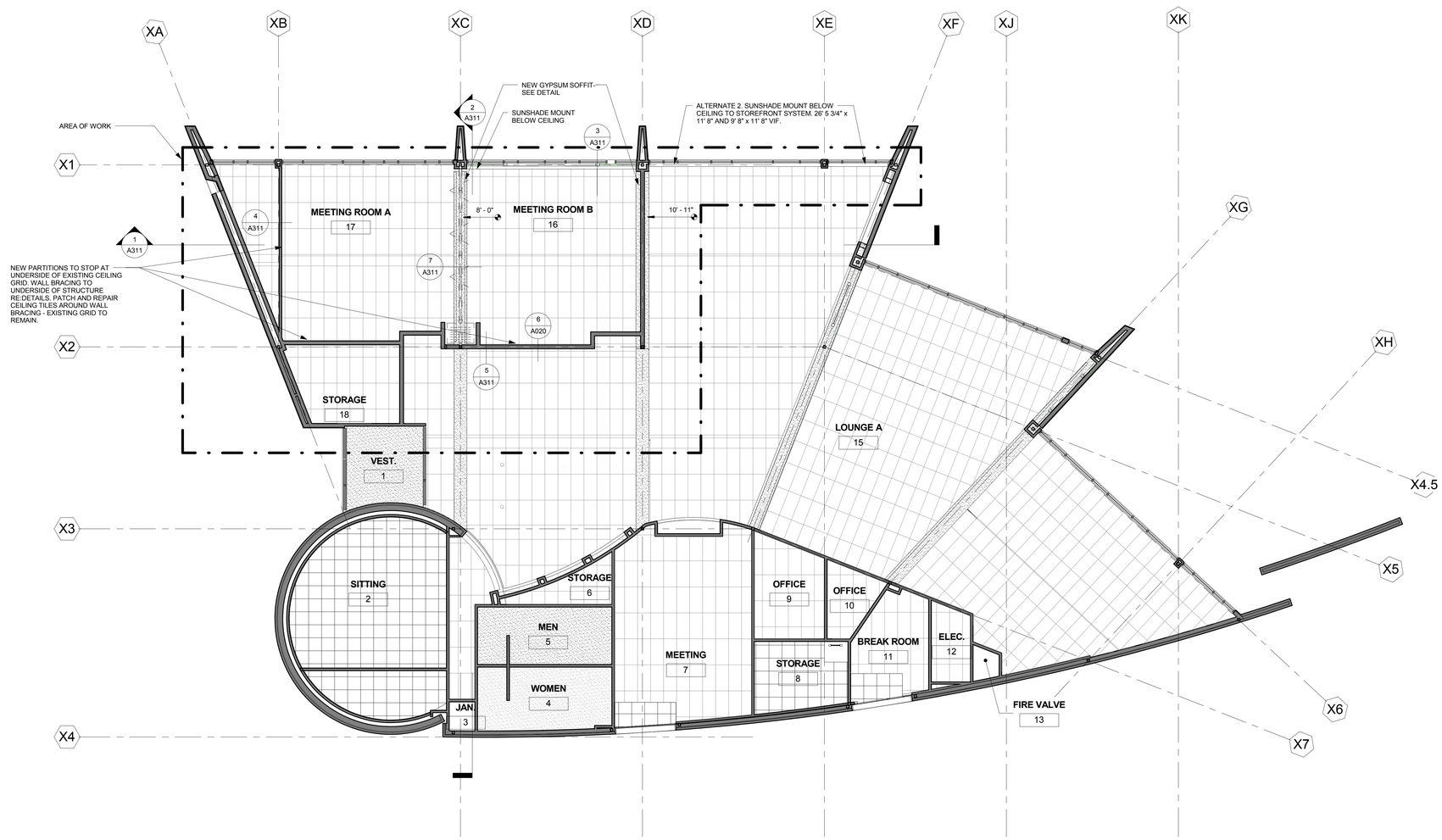
RCP LEGEND

- WALL EXTENDS TO B.O. DECK ABOVE
- WALL EXTENDS TO 8" BELOW B.O. DECK
- AREA OF WORK
- GYP. BD. CEILING
- SAT CEILING TYPE 1
- EXPOSED STRUCTURE

SEE MECHANICAL AND ELECTRAICAL LEGENDS FOR ADDITIONAL SYMBOLS

RCP GENERAL NOTES

1. ALL CEILING ELEVATIONS LISTED AS A.F.F. DIMENSIONS. SEE INTERIOR ELEVATIONS FOR CLARIFICATION IF NECESSARY.
2. REFER TO WALL TYPES LISTED ON A001. THOSE WALLS, DESIGNATED ON PLANS AND WITHIN DETAILS MAY BE INTENDED TO CONTAIN SOME SOUND, WATER VAPOR, SMOKE AND /OR FIRE ATTENUATION.
3. ALL EXISTING S.A.T. CEILILNGS TO REMAIN UNLESS NOTED OTHER WISE REPLACE ALL DAMAGED OR STAINED PANELS WITH MATCHING PANELS.



1 A211 FIRST FLOOR RCP
1/8" = 1'-0"

0 4' 8' 16'

PROJECT TRUE

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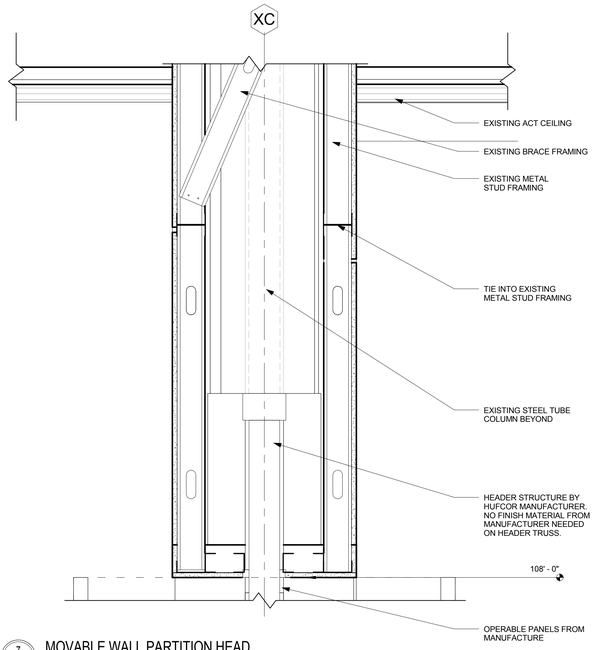
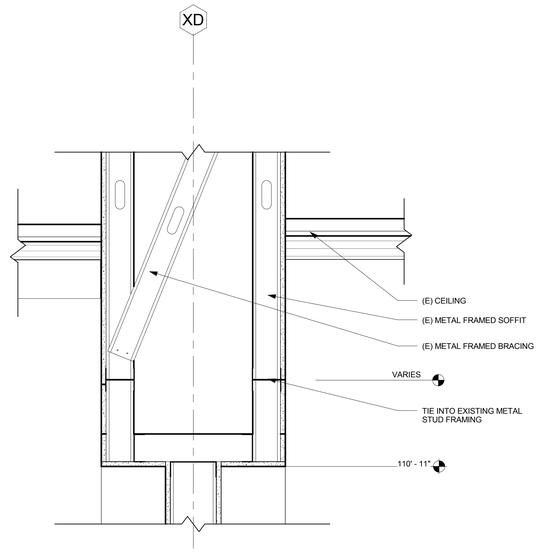
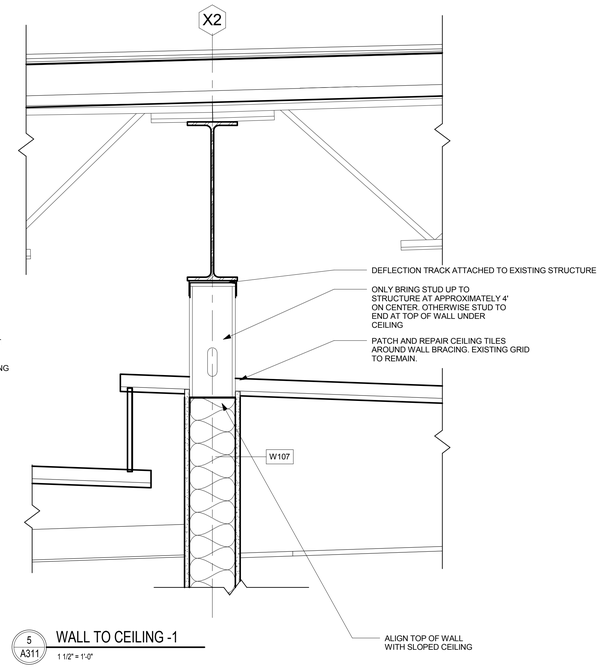


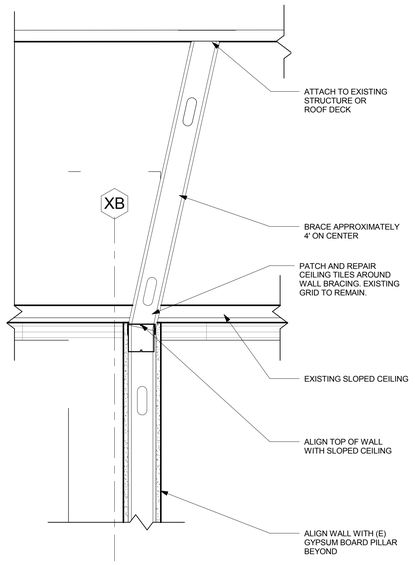
7 A311 MOVABLE WALL PARTITION HEAD
1 1/2" = 1'-0"



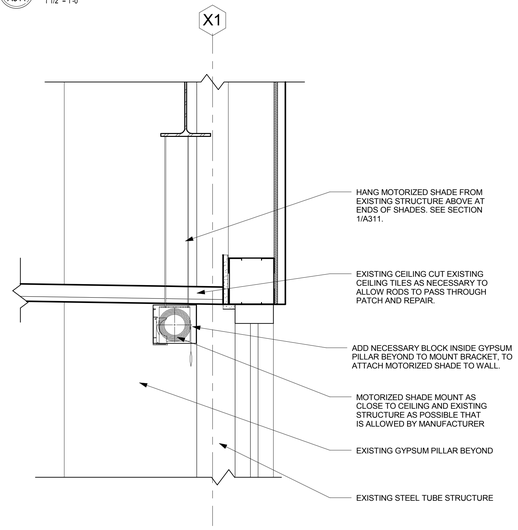
6 A311 SOFFIT DETAIL ON GRID XD
1 1/2" = 1'-0"



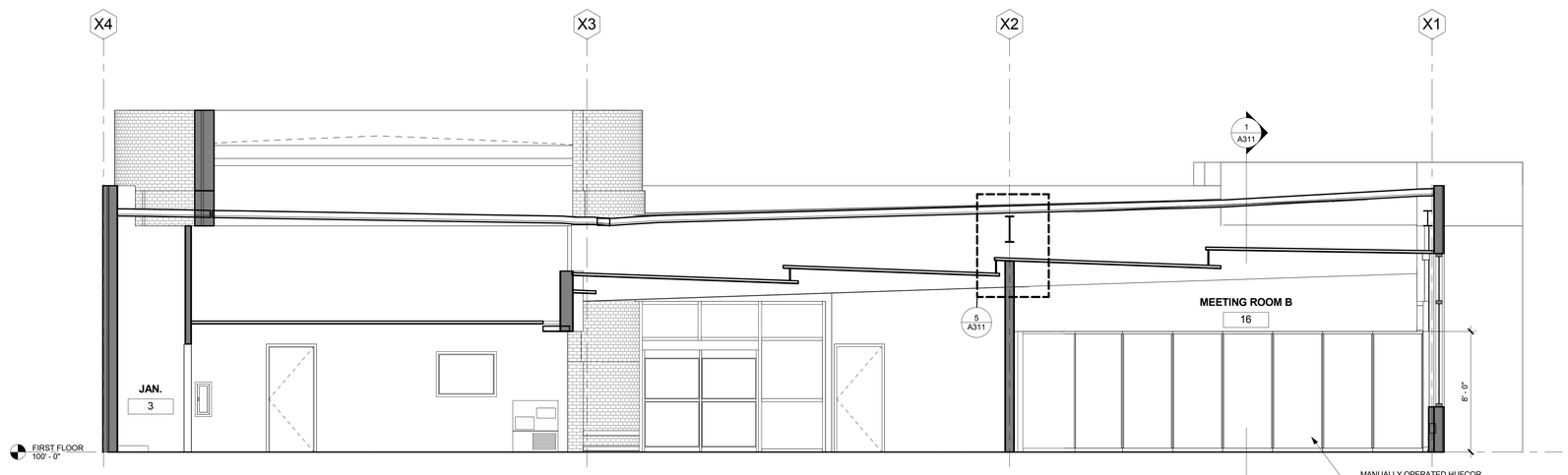
5 A311 WALL TO CEILING -1
1 1/2" = 1'-0"



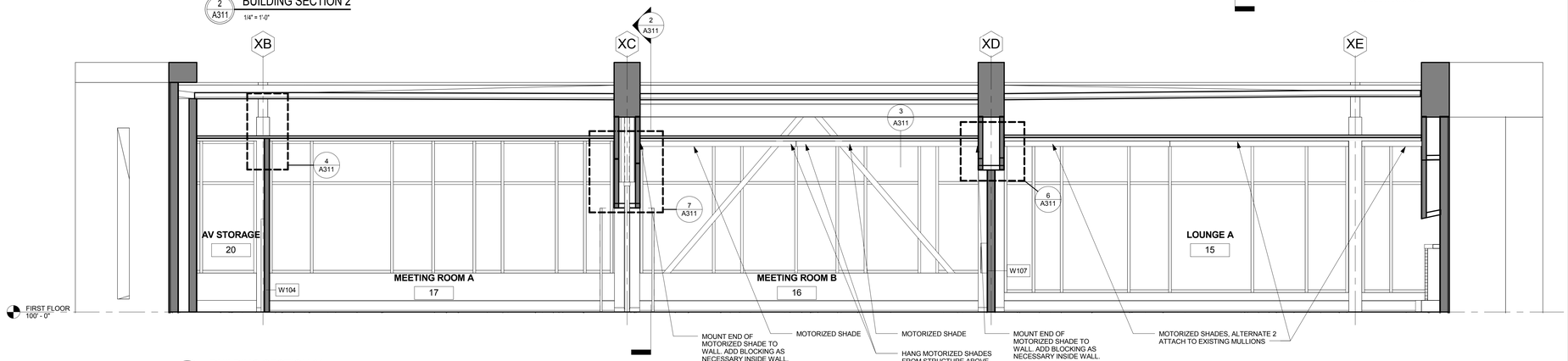
4 A311 WALL TO CEILING -2
1 1/2" = 1'-0"



3 A311 ADD ALTERNATE WINDOW SHADE
1 1/2" = 1'-0"



2 A311 BUILDING SECTION 2
1/4" = 1'-0"



1 A311 BUILDING SECTION 01
1/4" = 1'-0"

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LONE TREE LIBRARY REMODEL

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STATE OF COLORADO
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B-1468
11/23/16
LICENSED ARCHITECT

Project Number:	2016.027.01
Issue:	100% CD
Date:	2016.11.23
Drawn By:	PC
Checked By:	JG

Revisions:

Description Date:

Sheet title:

OVERALL BUILDING SECTIONS

A311

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ACCESSORY NOTES:

1. NOT ALL ITEMS ON VERTICAL ACCESSORY & FIXTURE LOCATIONS DRAWING WILL BE USED. RE: PLANS, ENLARGED PLANS AND INTERIOR ELEVATIONS FOR ITEMS USED.

2. [X] ACCESSORY INDICATOR.

3. REFER TO PLAN, INTERIOR ELEVATIONS AND VERTICAL ACCESSORY AND FIXTURE LOCATIONS DRAWINGS TO COORDINATE ACCESSORY AND FIXTURE LOCATIONS.

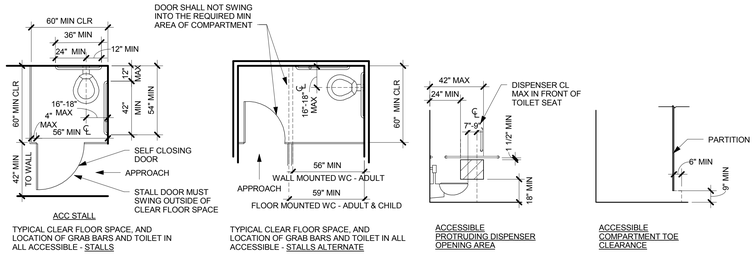
4. REFER TO VERTICAL ACCESSORY AND FIXTURE LOCATIONS & TOILET ACCESSIBILITY GUIDELINES DRAWINGS FOR MOUNTING HEIGHTS AND NOTES.

5. ALL ACCESSORIES IN ACC TOILET STALLS TO BE MOUNTED AT ACC HEIGHTS.

6. MOUNT 3-4 HEAVY DUTY COAT HOOKS (SEE SCHEDULE & ENLARGED PLAN) ON EACH TOILET PARTITION DOOR, RESTROOM DOOR, BABY CHANGING STATION.

7. REMOVE AND REMOUNT IN SAME LOCATION ALL ACCESSORIES AS NEEDED TO REPLACE WALL COVERING.

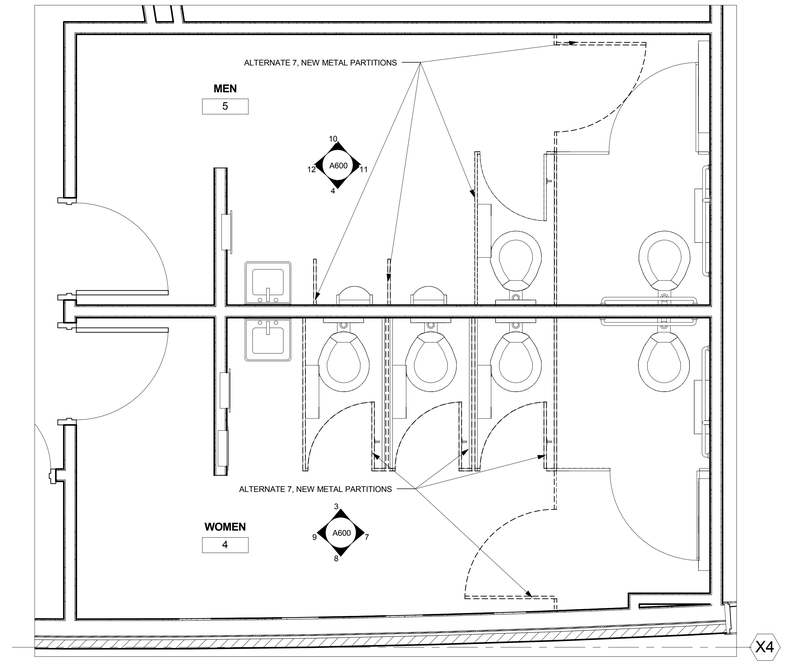
5 / A600 TOILET ACCESSORY - NOTES & HC LAYOUT
1/4" = 1'-0"



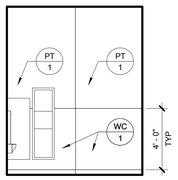
GENERAL NOTES:

1. ALL ACCESSIBLE DIMENSIONS ARE TO FACE OF FINISH MATERIAL, UON.

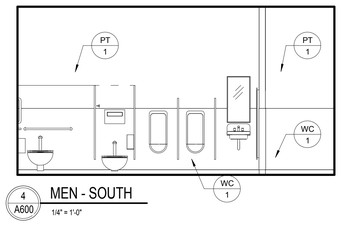
6 / A600 TOILET ACCESSIBILITY GUIDELINES
1/4" = 1'-0"



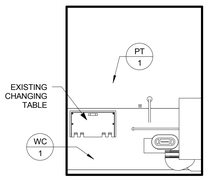
1 / A600 MEN AND WOMEN REST ROOM ENLARGED PLANS
1/2" = 1'-0"



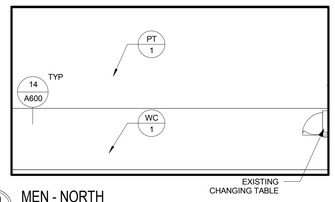
12 / A600 MEN - WEST
1/4" = 1'-0"



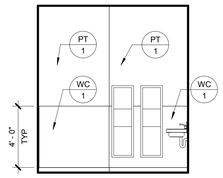
4 / A600 MEN - SOUTH
1/4" = 1'-0"



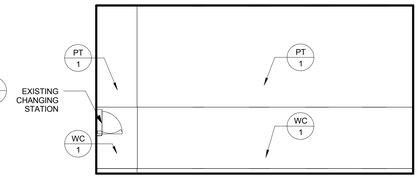
11 / A600 MEN - EAST
1/4" = 1'-0"



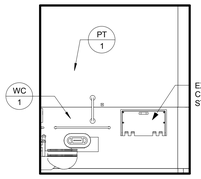
10 / A600 MEN - NORTH
1/4" = 1'-0"



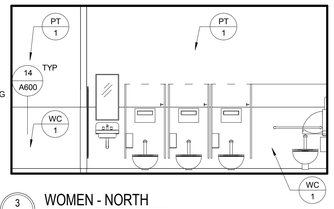
9 / A600 WOMEN - WEST
1/4" = 1'-0"



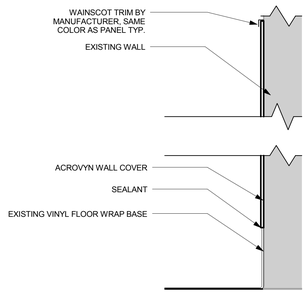
8 / A600 WOMEN - SOUTH
1/4" = 1'-0"



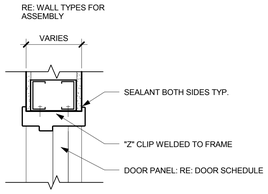
7 / A600 WOMEN - EAST
1/4" = 1'-0"



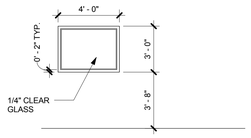
3 / A600 WOMEN - NORTH
1/4" = 1'-0"



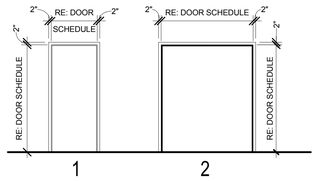
14 / A600 WALL COVER SECTION
3" = 1'-0"



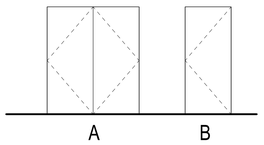
2 / A600 TYP. INT. DOOR HEAD (JAMB SIM)
1 1/2" = 1'-0"



13 / A600 INT. HW METAL WINDOW ELEVATION
1/4" = 1'-0"



FRAME TYPES
1/4" = 1'-0"



DOOR TYPES
1/4" = 1'-0"

Door Schedule

VG	Room Name	DOOR Size Width	DOOR Size Height	DOOR Type	DOOR Finish	DOOR Material	FRAME Type	FRAME Finish	FRAME Material	FRAME Details Head	FRAME Details Jamb	FRAME Details Threshold	Fire Rating	Hardware Set No.	Hardware FUNCTION	Comments
1	SITTING	3' - 0"	7' - 0"	B	FF	WD	1	PT	HM							RELOCATE EXISTING. CHANGE SWING DIRECTION
16	MEETING ROOM B	3' - 0"	7' - 0"	B	FF	WD	1	PT	HM	2/A700	2/A700			1.0		
17	MEETING ROOM A	3' - 0"	7' - 0"	B	FF	WD	1	PT	HM	2/A700	2/A700			1.0		
18A	STORAGE	3' - 0"	7' - 0"	B	FF	WD	1	PT	HM	2/A700	2/A700			3.0		
18B	STORAGE	6' - 0"	7' - 0"	A	FF	WD	2	PT	HM	2/A700	2/A700			2.0		
19	STORAGE	3' - 0"	7' - 0"	B	FF	WD	1	PT	HM	2/A700	2/A700			4.0		
20	AV STORAGE	3' - 0"	7' - 0"	B	FF	WD	1	PT	HM	2/A700	2/A700			5.0		

DOOR SCHEDULE LEGEND:
FF- FACTORY FINISH
PT- PAINTED
WD - WOOD
HW - HOLLOW METAL

DOOR / HARDWARE NOTES:
1. MATCH EXISTING DOOR HARDWARE, TYP.

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ACCESSORY SCHEDULES, ELEVATIONS AND DOOR SCHEDULE

A600

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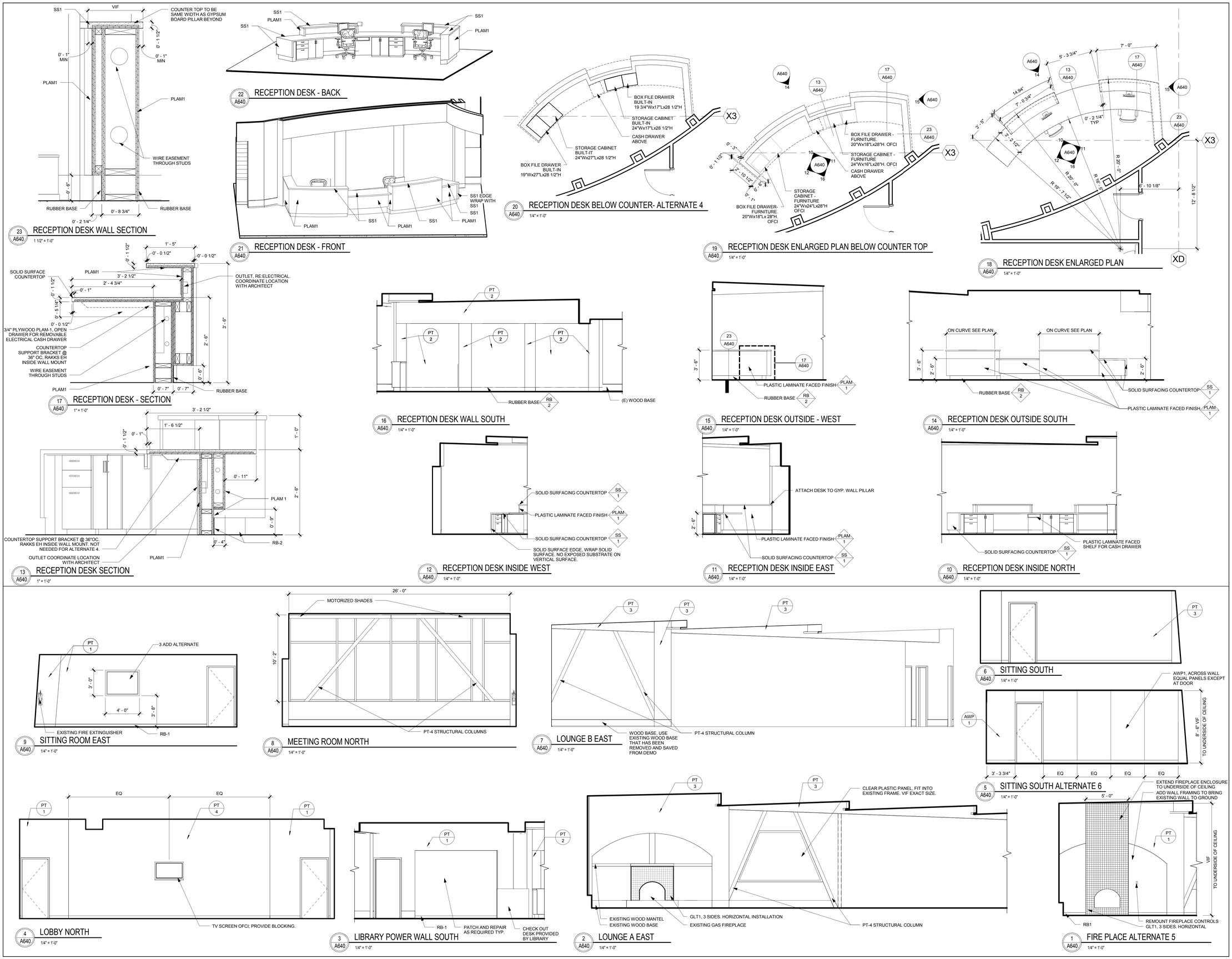

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ENLARGED RECEPTION DESK AND INTERIOR ELEVATIONS

A640

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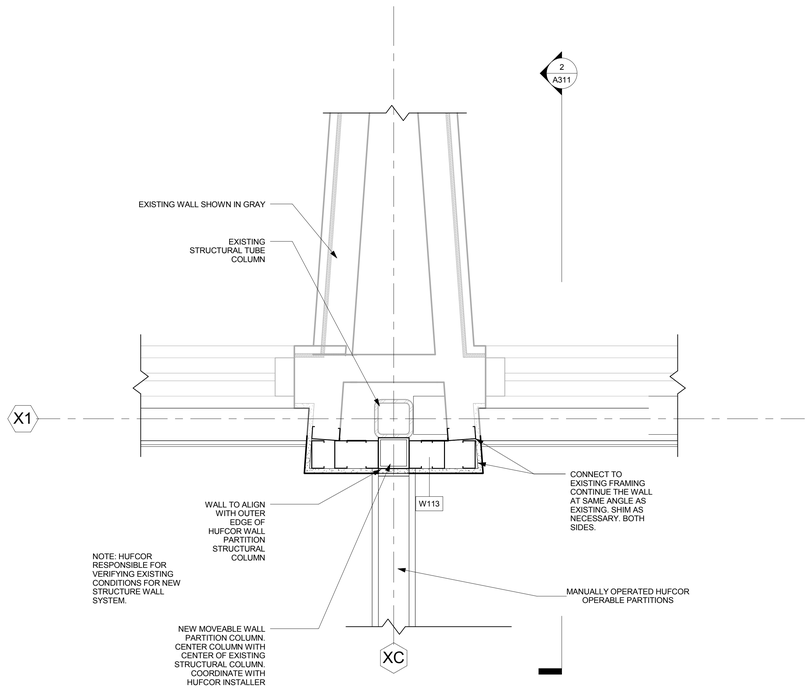
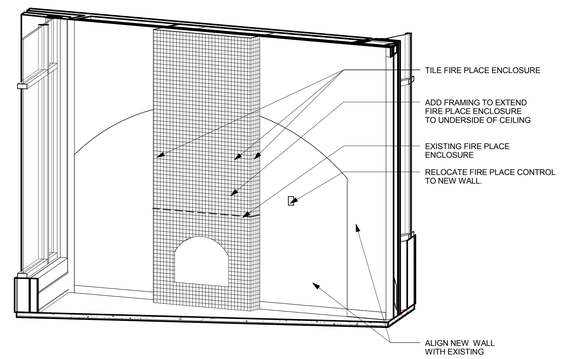
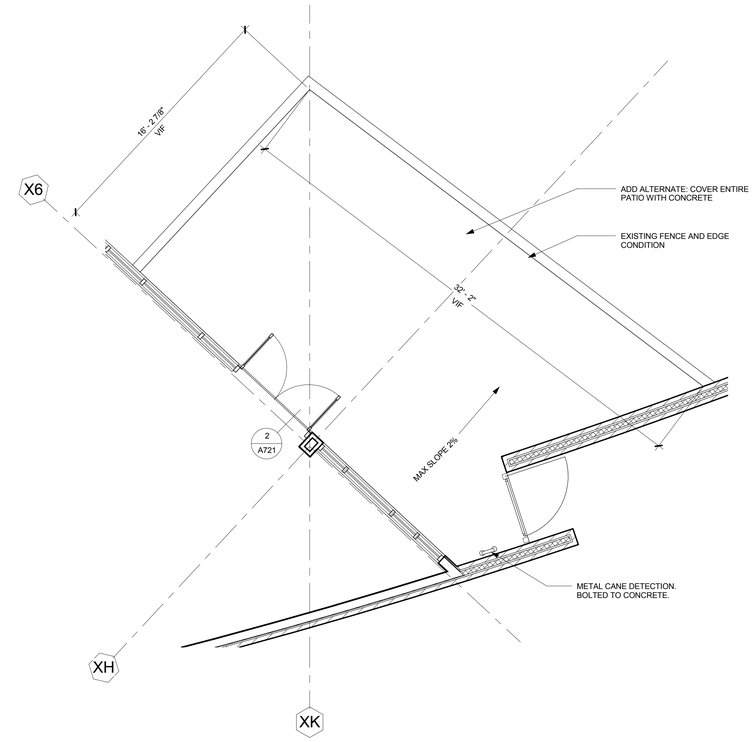


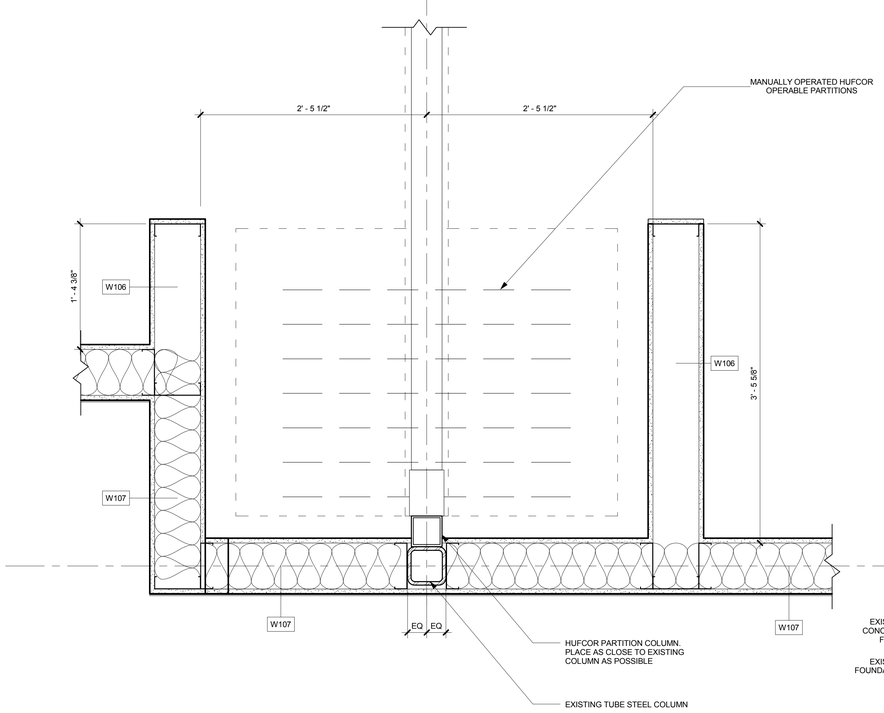
7 A721 MOVEABLE WALL PARTITION TO EXISTING WALL
1 1/2" = 1'-0"



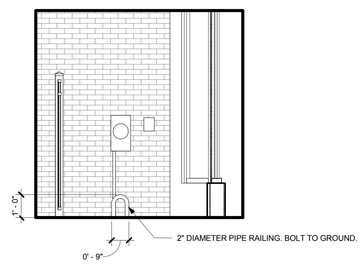
6 A721 ALTERNATE 5 - FIRE PLACE



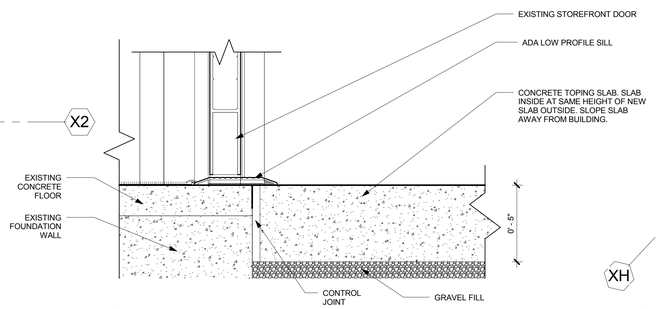
5 A721 PATIO - CONCRETE ALTERNATE 1
1/4" = 1'-0"



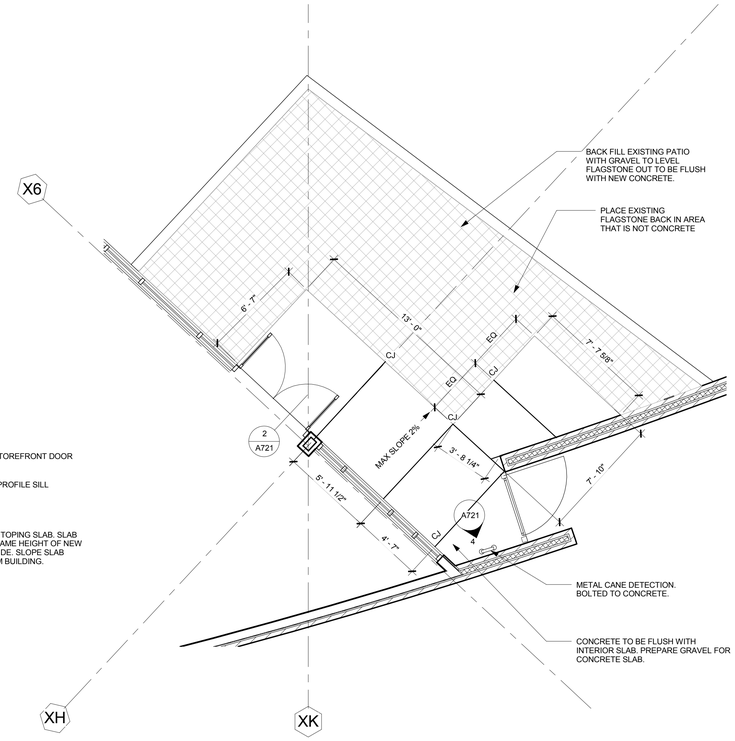
3 A721 MOVEABLE WALL PARTITION TO POCKET WALL
1 1/2" = 1'-0"



4 A721 PATIO
3/8" = 1'-0"



2 A721 THRESHOLD AT CONCRETE
3" = 1'-0"



1 A721 PATIO - CONCRETE WALK WAY
1/4" = 1'-0"

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PLAN DETAILS

A721

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GENERAL INTERIOR ABBREVIATIONS

(E)	EXISTING
ACY	ACRYLIC PANEL
AE-INT-CONC	ACID ETCHED INTEGRAL CONCRETE
APC	ACRYLIC PLASTER CEILING SYSTEM
AWP	ACOUSTICAL WALL PANEL
BB	BULLETIN BOARD
BN	BULLNOSE
BO	BY OWNER
CAT	CERAMIC ACCENT TILE
CC	CLEAR COAT
CF	CEILING FINISH
CG	CORNER GUARDS
CMT	CERAMIC MOSAIC TILE
CMT-B	CERAMIC MOSAIC TILE COVE BASE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CPT	CARPET
CWT	CERAMIC WALL TILE
CWT-B	CERAMIC WALL TILE BASE
CWT-BN	CERAMIC WALL TILE BULLNOSE
DF	DRINKING FOUNTAIN
DIV	DIVISION
EGT	EPOXY GROUT
EMAT	ENTRY MAT
EPF	EPOXY POURED FLOORING
EX	EXPOSED
FFIN	FACTORY FINISH
FF	FINISH FACE
FF	FINISH FLOOR
FF:	FLOOR FINISH
FF&E	FURNITURE, FIXTURE AND EQUIPMENT
FRP	FIBER REINFORECED PANEL
GL	GLASS
GLT	GLASS TILE
GM-GYM	GLASS MESH GYPSUM BOARD
GPH	GRAPHIC
GT	GROUT
GYP BD/GYB	GYPSUM BOARD
HORZ/H	HORIZONTAL
HPC	HIGH PERFORMANCE COATING
LIN	LINOLEUM
MB	MARKER BOARD
MCB	METAL COVE BASE
MD	METAL DESK
MTL	METAL
OF/OI	OWNER FURNISHED / OWNER...
OP	OPERABLE PARTITION
OTS	OPEN TO STRUCTURE
OFCI	OWNER FURNISHED CONTRACTOR...
PATT	PATTERN
PAV	PAVER TILE
P-CONC	POLISHED CONCRETE
PCP	PAPERSTONE PAPER COMPOSITE
PF	PARTITION FABRIC
PLAM	PLASTIC LAMINATE
POR	PORCELAIN TILE
POR-B	PORCELAIN TILE BASE
POR-D	PORCELAIN TILE DECORATIVE...
PT	PAINT
QT	QUARRY TILE
QT-B	QUARRY TILE BASE
R-NOSING	RUBBER STAIR NOSING
R-TILE	RUBBER TILE
RAF	RESILIENT athletic FLOORING
RAIL	RAILING
RB	RUBBER BASE
RES	RESIN PANEL
RF	RUBBER FLOOR
RSCP	REINFORCED SOLID COMPOSITE...
RT	RUBBER TREAD
RUB-STFY	RUBBER SAFETY FLOOR
S-CONC	SEALED CONCRETE
S-STL	STAINLESS STEEL
SAT	SUSPENDED ACOUSTICAL TILE
SCP	SOLID COMPOSITE PARTITION
SDT	STATIC DISSIPATIVE TILE
SLMT	SLATE MOSAIC TILE
SIM	SIMILAR
SLW	SLATWALL
SPH	SOLID PHENOLIC MATERIAL
SPL	SOLID PLASTIC MATERIAL
SPWP	SOLID PLASTIC WALL PANEL
SS	SOLID SURFACE
ST	STAIN
ST-CONC	STAINED CONCRETE
STG-FLR	STAGE FLOOR
STN	STONE
STN-B	STONE BASE
STN-T	STONE TILE
SW-CONC	SWIRLED CONCRETE
TB	TACK BOARD
TBD	TO BE DETERMINED
TECP	TECTUM PANEL
TEX	TEXTURED WOOD PANEL
TS	TRANSITION STRIP/REDUCER STRIP
UON	UNLESS OTHERWISE NOTED
VA	VARIES
V-SAT	VINYL SAT
VCT	VINYL COMPOSITION TILE
VERT/V	VERTICAL
VNR	VENEER
VIF	VERIFY IN FIELD
VPL	VENEER PLASTER
VRB	VENTED RUBBER BASE
VSF	VINYL SHEET FLOOR
VTF	VINYL TILE FLOOR
WB:	WALL BASE
WC	WALL COVERING
WD	WOOD
WDC	WOOD CEILING
WDF	WOOD FLOOR
WF:	WALL FINISH
WM	WALL MATT
WPC	WOOD POLYMER COMPOSITE
WR-GYP	WATER RESISTANT GYPSUM BOARD
WT	WINDOW TREATMENT
WVP	WOOD VENEER PANELING

3 A900 GENERAL INTERIOR ABBREVIATIONS

NTS

GENERAL INTERIOR FINISH NOTES:

GENERAL:

1. REFER TO ARCHITECTURAL GENERAL NOTES.

2. REFER TO ARCHITECTURAL SPECIFICATIONS FOR ALL SUBMITTAL AND/OR MOCKUP GUIDELINES AND REQUIREMENTS.

3. IN THE EVENT OF AN INCONSISTENCY BETWEEN THE DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT, THE CONTRACTOR SHALL SEEK CLARIFICATION OR INTERPRETATION FROM THE ARCHITECT PRIOR TO BIDDING.

4. REFER TO FINISH PLANS FOR GENERAL FINISHES. REFER TO ALL SPECIFICATIONS & INTERIOR DRAWINGS (INCLUDING PLANS, ELEVATIONS, RCP, ENLARGED PLANS & DETAILS) FOR COMPLETE INTERIORS INFORMATION.

5. REFERENCE ARCHITECTURAL PLANS FOR SUBSTRATE INFORMATION.

6. ALL REQUEST FOR SUBSTITUTIONS FOR SPECIFIED ITEMS SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT PRIOR TO BIDDING WITH ALTERNATIVE PRODUCT INFORMATION AND SAMPLES WILL BE CONSIDERED ONLY IF DEEMED ACCEPTABLE WITH REGARD TO QUALITY, APPEARANCE AND FUNCTION. REFER TO DIVISION 01 OF SPECIFICATIONS, FOR SUBSTITUTIONS REQUIREMENTS.

7. INSTALL ALL MANUFACTURED ITEMS, MATERIALS, AND EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS. REFER TO SPECIFICATIONS.

8. FOR ITEMS NOT SPECIFIED, ASSUME COLOR SELECTIONS TO BE MADE FROM FULL RANGE OF MANUFACTURES' STANDARDS INCLUDING PREMIUM COLORS.

9. WORK IS NEW, UNLESS NOTED EXISTING OR (E).

WALLS AND CEILING:

1. ASSUME LEVEL 4 FINISH FOR ALL GYPSUM BOARD PARTITIONS, UON. REFER TO DIV 09 OF SPECIFICATIONS.

2. FILL MASONRY WALLS BEFORE PAINTING. REFER TO DIV 09 OF SPECIFICATIONS.

3. REFER TO DIV 09 OF SPECIFICATIONS FOR THE SPECIFIC PAINT SYSTEMS AND DIV 01 FOR VOC REQUIREMENTS.

4. PAINT SHALL MATCH SPECIFIED MANUFACTURER COLORS INDICATED ON THE FINISH LEGEND.

5. CONTRACTOR TO PROVIDE 8 1/2"X11" PAINT SAMPLE OF ALL SPECIFIED PAINT COLORS IN ALL SHEENS INDICATED FOR APPROVAL BEFORE PROCEEDING WITH THE WORK. REFER TO DIV 09 OF SPECIFICATIONS.

6. PAINT GLOSS LEVEL REFER TO DIV 09 OF SPECIFICATIONS, FOR PAINT SYSTEMS.
a. PROVIDE LATEX SATIN/EGGSHELL FINISH AT TYPICAL WALLS.
b. MECHANICAL, STORAGE, STAIRWELLS, CONCESSIONS/CAFE: SEMI-GLOSS, HIGH PERFORMANCE COATING (HPC).
c. TYPICAL GYP. BD. CEILINGS/SOFFITS: LATEX MATTE FINISH
e. TYPICAL DOORS AND DOOR TRIMS: SEMI-GLOSS

7. FOR PAINT COLOR LOCATIONS SEE INTERIOR ELEVATIONS, FINISH PLANS AND RCPS.
a. TYPICAL WALL PAINT COLOR [PT1], UON. RE: INTERIOR ELEVATIONS, DETAILS AND FINISH PLANS FOR CALL OUTS.
b. ALL RESTROOM THAT DO NOT HAVE PAINT COLORS NOTED ARE TO BE PAINTED, [HPC1].
c. ALL STORAGE ROOMS, JANITOR CLOSETS, AND MECHANICAL ROOMS THAT DO NOT HAVE PAINT COLORS NOTED, ARE TO BE PAINTED [PT1].
d. IN DRY AREAS CEILING AND SOFFIT COLOR IS [PT1], UON. PAINT UNDERSIDE AND FACE OF SOFFIT AS NOTED.
e. ALL METAL EXPOSED COLUMNS ARE TO BE PAINTED [PT3] OR [HPC3] UNLESS NOTED.

2 A911 GENERAL INTERIOR FINISH NOTES

1/4" = 1'-0"

WALLS AND CEILING CONT:

8. HPC IS HIGH PERFORMANCE COATING. HPC# IS THE SAME COLOR AS THE LATEX PAINT COLOR AS INDICATED ON LEGEND AS PT#. PROVIDE A DRAW DOWN OF HPC COLORS.

9. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL SOFFIT & CEILING FINISH INFORMATION.

10. REFER TO INTERIOR ELEVATIONS & DETAILS FOR ADDITIONAL WALL FINISH INFORMATION.

11. PROVIDE FR PLYWOOD BACKER WITH NO ADDED UREA FORMALDEHYDE FOR ALL WALL MOUNTED PANELS IN EACH PHONE CLOSET.

12. FOR GYP BD REVEALS AND CONTROL, REFER TO DIV 09 OF SPECIFICATIONS.

13. PAINT METAL GRILLES, WALL DIFFUSERS, ELECTRICAL PANELS ETC WHICH ARE EXPOSED IN FINISH SPACES TO MATCH THE SURFACE ON WHICH THEY OCCUR.

14. PROVIDE CORNER GUARD PROFILE, FINISH, COLOR AND HEIGHT PER FINISH LEGEND. INSTALL WALL BASE, RE: FINISH PLANS FOR LOCATIONS.

SUBFLOOR TREATMENTS:

1. VAPOR EMISSIONS TESTING REQUIRED BELOW ALL FINISH FLOORS EXCEPT SEALED CONCRETE & WOOD FLOORING. DO NOT INSTALL PRODUCTS UNLESS SLAB(S) MEET MANUFACTURES' STANDARDS. REFER TO SPECIFICATIONS.

FLOOR, WALL AND BASE:

1. CENTER ALL FLOORING TRANSITIONS DIRECTLY UNDER THE CENTERLINE OF DOOR WHEN IN CLOSED POSITION. IN AN OPENING WITHOUT A JAMB, RE: FINISH PLANS FOR TRANSITION LOCATION.

2. HEAT WELD ALL RESILIENT SHEET FLOORING SEAMS AND SEAL. REFER TO DIV 09 OF SPECIFICATIONS.

3. PROVIDE COLOR MATCH WELD RODS FOR EACH SHEET RESILIENT FLOOR AS SPECIFIED IN FINISH LEGEND.

4. ALL EXPOSED CONCRETE FLOORS SHALL BE SEALED UON, REFER TO DIV 3 SPECIFICATIONS. EXCEPTION: POOL DECKS.

5. FLOAT FLOORS AS NECESSARY TO PROVIDE FLUSH TRANSITIONS BETWEEN FLOORING MATERIALS. REFER TO DIV 09 OF PROJECT SPECIFICATIONS.

6. PROVIDE AND INSTALL 4" COVE BASE AT ALL AREAS NOTED TO RECEIVE RUBBER BASE. BASE SHALL BE ROLL GOODS. REFER TO DIV 09 OF PROJECT SPECIFICATIONS.

7. WALL BASE AS INDICATED:
a. CARPET HAS RUBBER BASE, UON.
a. Exceptions: WALL HAS EXISTING WOOD BASE.
b. LINOLEUM HAS RUBBER BASE, UON.
c. VINYL HAS RUBBER BASE, UON.
d. SEALED CONCRETE HAS RUBBER BASE.

FLOOR, WALL AND BASE CONT:

8. PROVIDE TRANSITION STRIPS AT ALL CHANGE OF FLOOR MATERIALS. WITH THE LOWEST PROFILE POSSIBLE.
REFER TO DETAILS AND DIV 09 OF PROJECT SPECIFICATIONS.
a. CONTRACTOR TO PROVIDE SAMPLE OF EACH PROPOSED RUBBER TRANSITION STRIP AND/OR METAL TRANSITION STRIP.
b. COLOR TO MATCH RUBBER BASE IN AREAS WHERE RUBBER TRANSITIONS ARE PROPOSED, UON.
d. ALL STRIPS ARE TO BE INSTALLED PER MANUFACTURES' RECOMMENDATIONS AT ALL FLOOR COVERING TRANSITIONS.
e. PROVIDE SEAMING DIAGRAM WITH LOCATION OF PROPOSED REDUCER STRIPS.

9. INSTALL DIRECTIONAL FLOORING ORIENTED AS SPECIFIED ON FINISH PLAN.

10. ALL RUBBER FLOORING TO RECEIVE SEALER. REFER TO DIV 09 OF SPECIFICATIONS

11. PROVIDE INTEGRATED BREAK METAL BASE AT ALL CURTAIN WALLS UON.

CASEWORK & MILLWORK:

1. WOOD TRIM AND BASE SHALL BE SOLID WOOD. REFER TO DIV 06 OF SPECIFICATIONS.

2. REFER TO INTERIOR ELEVATIONS, MILLWORK DETAILS AND FINISH PLANS FOR PLACEMENT OF VARIOUS STAINS AND WOOD SPECIES.

3. PROVIDE STAIN AND URETHANE SAMPLES ON ALL INDICATED SUBSTRATES WITH STAIN COLOR FOR ARCHITECTS APPROVAL, PRIOR TO ANY WORK. REFER TO DIV 06 OF SPECIFICATIONS.

4. PROVIDE LAMINATE OR PLYWOOD AT ALL EXPOSED OR SEMI-EXPOSED CASEWORK, RE: INT ELEVS & DETAILS.

5. UNEXPOSED INTERIOR SURFACES OF ALL MILLWORK TO BE WHITE MELAMINE, UON REFER TO DIV 06 OF SPECIFICATIONS.

6. CAULK COUNTERS WHERE THEY ABUT WALLS WITH CLEAR CAULK.

7. PROVIDE WALL BLOCKING FOR ALL CABINETRY AND SYSTEMS FURNITURE, RE: ELEVATIONS AND FURNITURE PLANS FOR LOCATIONS AND EXTENT. IF NO STATIONS ARE INDICATED. ASSUME 2 WALLS PER OFFICE.

8. INSTALL TOP OF CHAIR RAIL AT 32" AFF OC, UON.

9. PROVIDE SOLID MAPLE HARDWOOD FOR ALL SPECIFIED MILLWORK TRIM, STAINED.

DOORS & FRAMES:

1. PAINT ALL METAL DOORS [PT5], UON. PAINT ALL VISION PANELS, SIDE LIGHTS AND WINDOW FRAMES [PT5], UON.

2. IN AREAS WHERE FRAMES ARE DIFFERENT COLORS ON EACH SIDE OF WALL, STOP COLOR SO THAT ONLY ONE COLOR IS VISIBLE WITH THE DOOR IN CLOSED POSITION.

WINDOWS:

1. FOR EXTENT OF WINDOW TREATMENT AND LOCATIONS REFER TO WINDOW AND DOOR TYPE SHEET.

2. PROVIDE MECHANIZED MOTOR OPERATOR AT ANY WINDOW SHADE TOO LARGE OR HEAVY TO OPERATE MANUALLY AS NOTED ON WINDOW TYPE SHEET AND SHADE SCHEDULE.

DOORS AND FRAMES CONT:

SPECIALTIES:
1. PROVIDE BLOCKING AT ALL WALLS SCHEDULED FOR WALL HUNG EQUIPMENT, SYSTEMS FURNITURE, MARKER BOARD TACK BOARDS, TOILET ACCESSORIES, ETC. RE: PLANS, ELEVATIONS, EQUIPMENT & FURNITURE PLANS.

2. PROVIDE ARTRAIL AS NOTED ON PLAN AND/OR INTERIOR ELEVATIONS. RE: SPECIFICATIONS.

3. INSTALL FRP ABOVE WALL BASE. RE: FINISH PLANS FOR EXTENT AND FINISH LEGEND FOR COLOR.

4. ALL FURNITURE IS OF/OI UON.

GRAPHICS:

1. FABRICATOR TO COORDINATE, OBTAIN IMAGE RIGHTS AND PURCHASE FINAL IMAGES FOR ALL GRAPHIC BANNERS, SILHOUETTES, CUTOUTS, WALL COVERINGS, WINDOW FILMS AND GRAPHIC FILMS.

DEMOLITION NOTES:
1. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR PROJECT SCOPE.

2. REMOVE EXISTING SIGNAGE, AND WALL MOUNTED ACCESSORIES WITHIN THE PROJECT SCOPE AND RETURN TO OWNER FOR STORAGE PRIOR TO DEMOLITION.

3. REMOVE COMPLETELY FROM THE JOBSITE ALL MATERIALS SPECIFIED FOR DEMOLITION AND NOT NOTED TO BE RETURNED TO OWNER.

4. REPLACE ANY ITEM DEMOLISHED OR DAMAGED BY DEMOLITION AND NOT SPECIFIED WITH A LIKE ITEM AS APPROVED BY OWNER AT NO ADDITIONAL COST.

5. PROTECT ALL EXISTING FLOOR, WALL, DOOR AND CEILING FINISHES TO REMAIN. REPAIR AN DAMAGE AS A RESULT OF DEMOLITION OR CONSTRUCTION.

6. REMOVE EXISTING FLOORING, ADHESIVE AND MASTIC AT ALL EXISTING FLOORS SCHEDULED FOR DEMOLITION. PATCH AND PREP SUBFLOOR TO MEET MANUFACTURES REQUIREMENTS FOR NEW FLOORING MATERIALS. FLOAT SUBFLOOR AS NECESSARY TO ALIGN FINISHED SURFACE BETWEEN NEW FLOORING AND EXISTING TO REMAIN.

7. DEMOLISH AND STORE ALL EXISTING CORNER GUARDS AND WALL MOUNTED EQUIPMENT PRIOR TO CONSTRUCTION, UON.

INTERIOR FINISH LEGEND

CARPET
CPT1 TANDUS 18 X 36 TILE;
COLOR: CEDAR SHAKE (13202); VERTICAL ASHLAR INSTALL

ACOUSTICAL WALL PANELS
AWP1 A075 ABSORPTIVE WALL PANEL WITH GUILFORD OF MAINE GREEN OLIVE 2048

GLASS TILE
GLT1 DALTILE WILLOW WATERS CW21, GROUNT WHITE

PAINT (PT) / HIGH PERFORMANCE (HPC) / ACRYLIC PLASTER COATING (APC)
PTX / HPCX / APCX TO MATCH CORESPONDING COLORS BELOW
PT1 SHERWIN WILLIAMS WESTHIGHLAND WHITE 7566
PT2 SHERWIN WILLIAMS SECRET COVE 9058
PT3 SHERWIN WILLIAMS MYTHICAL 6550
PT4 SHERWIN WILLIAMS MOUNTAIN ROAD 7743
PT5 SHERWIN WILLIAMS PEWTER CAST 7673

PARTITION FABRIC
PF1 HUFCOR REVELATIONS - GLACIER 100-14

PLASTIC LAMINATE
LONG LEAD TIME NO ALTERNATES WILL BE ACCEPTED
PLAM1 WILSONART 4941 COSMIC STRANDZ

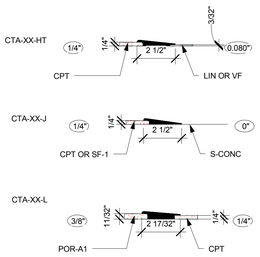
RUBBER BASE & TRANSITION STRIPS
RB1 JOHNSONITE, TRADITIONAL RUBBER WALL BASE, 4" WITH TOE, ROLLED GOODS, 20 CHARCOAL
RB2 JOHNSONITE, TRADITIONAL RUBBER WALL BASE, 6" WITH TOE, ROLLED GOODS, 20 CHARCOAL

SAT
REFER TO RCP'S AND SPECIFICATIONS FOR CEILING TILE

SOLID SURFACE
LONG LEAD TIME ITEM NO ALTERNATES WILL BE ACCEPTED
SS1 CORIAN SAVANNAH

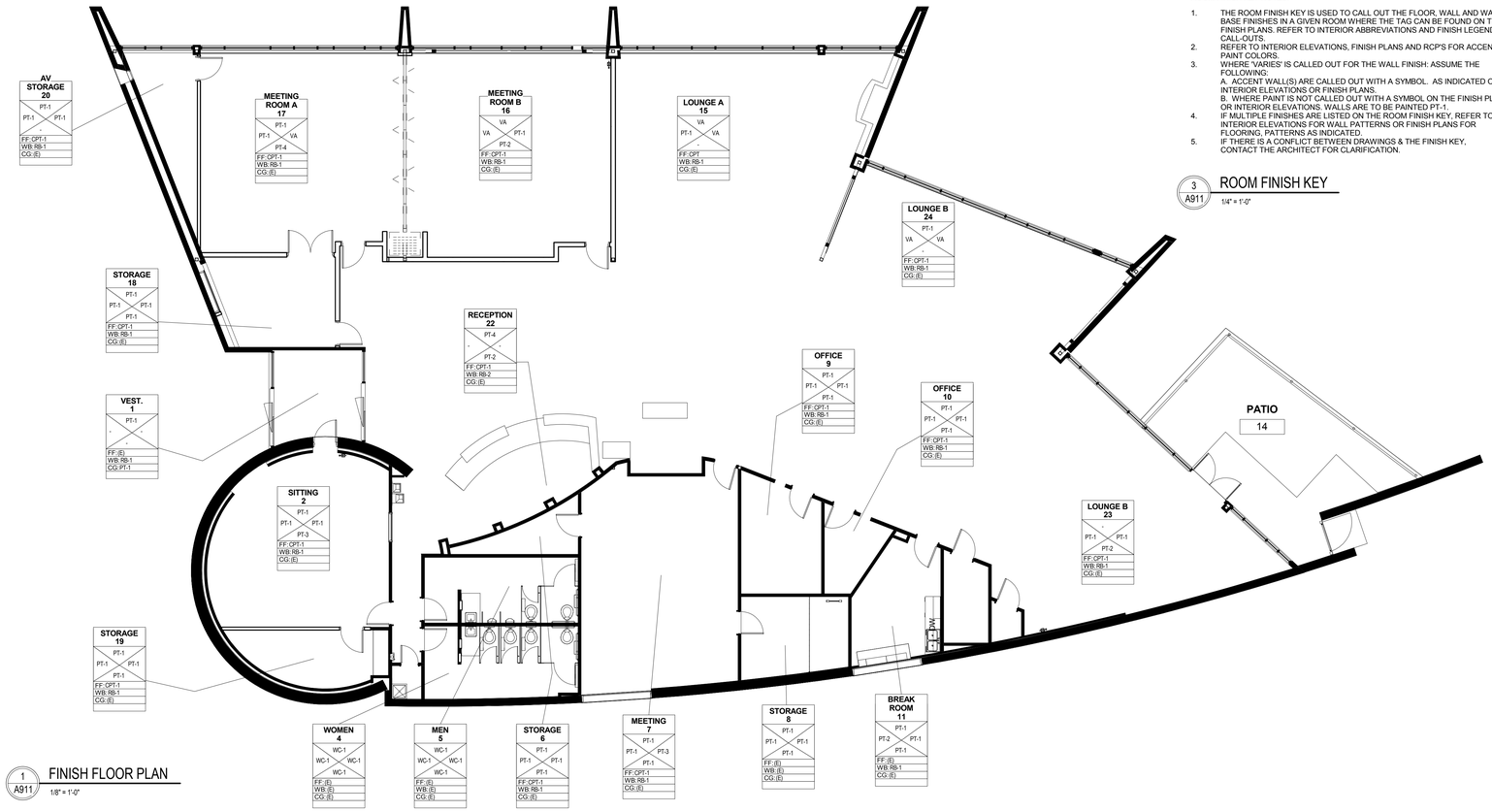
WALL COVERINGS
WC1 ACROVYN (ENGINEERED PETG RIGID SHEET) - PEARL GRAY 136 WITH MATCHING COLOR TRIM AND SEALANT
ALTERNATE 7 - COLOR BLUE SILK 930

WINDOW TREATMENTS
WT1 TBD



4 A911 FLOOR TRANSITIONS

3" = 1'-0"



1 A911 FINISH FLOOR PLAN

1/8" = 1'-0"

ROOM NAME		
ROOM NUMBER		#
WALL FINISH	WF:	
FLOOR FINISH	FF:	
WALL BASE	WB:	
CEILING FINISH	CF:	
NOTES		

ROOM FINISH KEY NOTES:

1. THE ROOM FINISH KEY IS USED TO CALL OUT THE FLOOR, WALL AND WALL BASE FINISHES IN A GIVEN ROOM WHERE THE TAG CAN BE FOUND ON THE FINISH PLANS. REFER TO INTERIOR ABBREVIATIONS AND FINISH LEGEND FOR CALL-OUTS.
2. REFER TO INTERIOR ELEVATIONS, FINISH PLANS AND RCP'S FOR ACCENT PAINT COLORS.
3. WHERE 'VARIES' IS CALLED OUT FOR THE WALL FINISH: ASSUME THE FOLLOWING:
A. ACCENT WALL(S) ARE CALLED OUT WITH A SYMBOL. AS INDICATED ON INTERIOR ELEVATIONS OR FINISH PLANS.
B. WHERE PAINT IS NOT CALLED OUT WITH A SYMBOL ON THE FINISH PLANS OR INTERIOR ELEVATIONS. WALLS ARE TO BE PAINTED PT-1.
4. IF MULTIPLE FINISHES ARE LISTED ON THE ROOM FINISH KEY, REFER TO THE INTERIOR ELEVATIONS FOR WALL PATTERNS OR FINISH PLANS FOR FLOORING, PATTERNS AS INDICATED.
5. IF THERE IS A CONFLICT BETWEEN DRAWINGS & THE FINISH KEY, CONTACT THE ARCHITECT FOR CLARIFICATION.

3 A911 ROOM FINISH KEY

1/4" = 1'-0"

BARKER RINKER SEACAT ARCHITECTURE

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DAVID S. HANNAH
B-1468
11/23/16
LICENSED ARCHITECT

Project Number:	2016.027.01
Issue:	100% CD
Date:	2016.11.23
Drawn By:	PC
Checked By:	JG

Revisions:

Description Date:

Sheet title:

FINISH FLOOR PLAN

A911

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11/30/2016 9:55:58 AM C:\Users\patiencecarter\Documents\LTLR_ARCH-CENTRAL_patiencecarter.rvt

11/23/2016 8:22:50 AM C:\Users\JGuadio\Documents\R16-16114-HVAC-CENTRAL_jguadio.rvt

GENERAL LEGEND

ABBV.	SYMBOL	DESCRIPTION
G.C.		GENERAL CONTRACTOR
M.C.		MECHANICAL CONTRACTOR
E.C.		ELECTRICAL CONTRACTOR
T.C.C.		TEMPERATURE CONTROL CONTRACTOR
F.P.C.		FIRE PROTECTION CONTRACTOR
A.F.F.		ABOVE FINISHED FLOOR
A.F.G.		ABOVE FINISHED GRADE
B.F.F.		BELOW FINISHED FLOOR
B.F.G.		BELOW FINISHED GRADE
N.I.C.		NOT IN CONTRACT
(N)		NEW
(E)		EXISTING
		EXISTING (DEMOLITION OR REMOVED)
		CONTROL WIRING
AD/AP		ACCESS DOOR/ACCESS PANEL
		POINT OF CONNECTION - NEW TO EXISTING
		PITCH PIPE DOWN IN DIRECTION OF ARROW
	X / XXX	X = SECTION/DETAIL NUMBER XXX = SHEET NUMBER WHERE SECTION/DETAIL IS DRAWN

HVAC LEGEND

ABBV.	SYMBOL	DESCRIPTION
SF		SUPPLY FAN
EF		EXHAUST FAN
RF		RETURN FAN
UH		UNIT HEATER
CUH		CABINET UNIT HEATER
BBR		BASEBOARD RADIATION
LVR		LOUVER
SD		SLOT DIFFUSER
SR		SUPPLY REGISTER
SG		SUPPLY GRILLE
FG		FLOOR GRILLE
RR		RETURN REGISTER
RG		RETURN GRILLE
ER		EXHAUST REGISTER
EG		EXHAUST GRILLE
TG		TRANSFER GRILLE
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR
TA		TRANSFER AIR
MA		MAKE-UP AIR

HVAC LEGEND

ABBV.	SYMBOL	DESCRIPTION
CD	CD	CONDENSATE DRAIN
		COMPOUND PRESSURE GAUGE
MCD		MOTORIZED CONTROL DAMPER
		BACKDRAFT DAMPER
MVD		MANUAL VOLUME DAMPER
FD		FIRE DAMPER
FSD		COMBINATION MOTORIZED FIRE/SMOKE DAMPER
(E)FD		EXISTING FIRE DAMPER
(E)FSD		EXISTING COMBINATION MOTORIZED FIRE/SMOKE DAMPER
	$	WALL SWITCH
	$	WALL SWITCH WITH PILOT LIGHT
		THERMOSTAT
		TEMPERATURE SENSOR
		HUMIDISTAT
		HUMIDITY SENSOR
		SMOKE DETECTOR
		SUPPLY DUCT UP/SUPPLY DUCT DOWN
		RETURN/EXHAUST DUCT UP/RETURN/EXHAUST DUCT DOWN
		ROUND DUCT UP / DOWN
		DUCT ELBOW WITH TURNING VANES
		SQUARE TO ROUND TRANSITION
		OFFSET DUCT UP / DOWN IN DIRECTION OF ARROW
		CONICAL SPIN-IN FITTING WITH MANUAL VOLUME DAMPER
		CONICAL SPIN-IN FITTING WITHOUT MANUAL VOLUME DAMPER
		45° TAKEOFF
		STANDARD RADIUS ELBOW
	10x8	NEW DUCT - WIDTH x DEPTH
	(E)10x8	EXISTING DUCT TO REMAIN
	10x8	EXISTING DUCT TO BE REMOVED
CD		CEILING DIFFUSER (FOUR WAY THROW PATTERN)
CD	EQUALS	CEILING DIFFUSER WITH FLOW PATTERN INDICATION (TWO WAY)
CD	EQUALS	CEILING DIFFUSER WITH FLOW PATTERN INDICATION (ONE WAY)
CD	EQUALS	CEILING DIFFUSER WITH FLOW PATTERN INDICATION (THREE WAY)
CD	EQUALS	CEILING DIFFUSER WITH FLOW PATTERN INDICATION (TWO WAY)
SD		SLOT DIFFUSER
RG/EG		RETURN OR EXHAUST REGISTER OR GRILLE
		RETURN GRILLE WITH SOUND BOOT
		FLEXIBLE DUCTWORK
		AIRFLOW - RETURN/EXHAUST
		AIRFLOW - SUPPLY

FIRE PROTECTION GENERAL NOTES

1. ALL WORK SHALL BE PER LOCAL BUILDING AND FIRE DISTRICT APPROVAL.
2. RELOCATE EXISTING FIRE SPRINKLER HEADS PER NEW WALL LAYOUT. NEW FIRE SPRINKLER HEADS SHALL MATCH EXISTING.
3. ALL PIPING SHALL CONFORM TO NFPA 13.
4. PROVIDE SHOP DRAWINGS FOR ALL WORK THAT ADHERERS TO ALL LOCAL CODES. BUILDING OWNER INSURANCE CARRIER, AND NFPA REQUIREMENTS.
5. PROVIDE HYDRAULIC CALCULATION ALONG WITH SHOP DRAWINGS FOR ARCHITECT/ENGINEER/OWNER/CODE APPROVAL.
6. ALL FIRE SPRINKLER HEADS SHALL MATCH EXISTING IN FINISHED AREAS AND BRASS PENDANT IN UNFINISHED AREAS. ALL HEADS SHALL BE LOCATED IN CEILING TILES IN A UNFORM PATTERN. 1/4" POINTS IN 2x4 GRID IS ACCEPTABLE.
7. IT SHALL BE THE FIRE PROTECTION CONTRACTOR'S RESPONSIBILITY TO CALCULATE, DESIGN AND INSTALL THE FIRE PROTECTION SYSTEM(S) CALLED FOR, INCLUDING ALL PIPING, FITTINGS, EQUIPMENT, DRAINS, SPRINKLERS, ETC. AS MAYBE REQUIRED FOR A COMPLETE, APPROVED AND OPERATIONAL FIRE PROTECTION SYSTEM IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT CEILING MOUNTING HEIGHTS AND LOCATION OF CEILING MOUNTED EQUIPMENT.
9. FURNISH SHOP DRAWINGS OF THE SYSTEM ALONG WITH HYDRAULIC CALCULATIONS AND PRODUCT DATA OF ALL PIPING, EQUIPMENT AND SPRINKLERS PROPOSED PRIOR TO INSTALLATION.
10. COORDINATE LOCATIONS OF ALL SPRINKLER WITH CEILING SYSTEMS AND ALL CEILING MOUNTED EQUIPMENT.
11. CONNECTIONS TO, AND SHUTDOWNS OF EXISTING SYSTEMS SHALL BE COORDINATED WITH OWNER AND LOCAL FIRE DEPARTMENT. SCHEDULE WORK TO MINIMIZE INTERFERENCE WITH OWNERS OPERATIONS AND DOWNTIME OF EXISTING SYSTEM.
12. OFFSET PIPING AS REQUIRED TO CLEAR EXISTING STRUCTURAL ELEMENTS, MECHANICAL AND ELECTRICAL EQUIPMENT. INCLUDE OFFSETS IN HYDRAULIC CALCULATION DATA.
13. FINAL LOCATIONS OF ALL FIRE SPRINKLER SHALL BE APPROVED BY THE ARCHITECT.

SHEET INDEX

SHEET NUMBER	MECHANICAL, PLUMBING & FIRE PROTECTION SHEET TITLE	SHEET SCALE	SHEET ISSUED
M000	MECHANICAL COVER SHEET - LEGEND, GENERAL NOTES AND SHEET INDEX	NONE	X
M020	HVAC AND PLUMBING DEMOLITION PLAN	1/8"	X
M101	FIRST FLOOR HVAC AND PLUMBING PLAN	1/8"	X
M700	HVAC SCHEDULES, DETAILS AND SPECIFICATIONS	NONE	X

MECHANICAL DEMOLITION GENERAL NOTES

1. COORDINATE DEMOLITION REQUIREMENTS WITH THE GENERAL CONTRACTOR.
2. COORDINATE EXTENT OF DEMOLITION WITH THE NEW CONSTRUCTION AS SHOWN IN THESE DOCUMENTS.
3. EXISTING MECHANICAL WORK IS SHOWN LIGHT.
4. ALL MECHANICAL ITEMS INDICATED TO BE DEMOLISHED SHALL BE INSPECTED FOR SALVAGE BY THE OWNER. ALL NON-SALVAGEABLE ITEMS SHALL THEN BE IMMEDIATELY REMOVED FROM THE SITE BY THE MECHANICAL CONTRACTOR.
5. ALL UNUSED TEMPERATURE CONTROL WIRING, WIRE MOLD, PNEUMATIC TUBING, AND CONTROL COMPONENTS SHALL BE REMOVED.
6. ALL UNUSED HANGERS AND SUPPORTS SHALL BE REMOVED.
7. REMOVAL OR INSTALLATION OF CONTROLS, PIPES, DUCTS, AND EQUIPMENT MAY REQUIRE THE REMOVAL OF EXISTING WALLS AND CEILINGS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND PAINTING THESE WALLS AND/OR CEILINGS SO THEY MATCH THE EXISTING WHERE NOT REPLACED UNDER THE ARCHITECTURAL DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW THE MECHANICAL DRAWINGS TO IDENTIFY THESE LOCATIONS PRIOR TO BID PRICING.
8. GENERAL CONTRACTOR SHALL PATCH AND PAINT WALL TO MATCH EXISTING AT THE DEMOLISHED CONTROLS.
9. GENERAL CONTRACTOR SHALL PATCH AND SEAL UNUSED ROOF PENETRATIONS AT DEMOLISHED MECHANICAL TO MATCH EXISTING CONDITIONS.
10. GENERAL CONTRACTOR SHALL PATCH THE CEILING, ROOF AND WALLS TO MATCH EXISTING AT DEMOLISHED HANGERS AND SUPPORTS.
11. GENERAL CONTRACTOR SHALL MAKE REPAIRS TO ALL EXISTING BUILDING COMPONENTS THAT HAVE BEEN AFFECTED BY THE DEMOLITION OF MECHANICAL SYSTEMS.

MECHANICAL GENERAL NOTES

1. THE MECHANICAL CONTRACTOR SHALL INSPECT SITE TO BECOME FAMILIAR WITH THE SCOPE OF THE WORK. THESE DOCUMENTS DO NOT REFLECT AS-BUILT CONDITIONS. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND THE ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION PRIOR TO BID PRICING. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.
2. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL ABOVE CEILING EQUIPMENT, DUCTWORK AND CEILING MOUNTED AIR DEVICES WITH EXISTING ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL CONDITIONS. APPROXIMATE LOCATIONS OF NEW WORK ARE SHOWN AND SHOULD BE FOLLOWED AS CLOSE AS EXISTING CONDITIONS WILL ALLOW.
3. MECHANICAL WORK SHALL COMPLY WITH ALL APPLICABLE CODES. VERIFY ALL REQUIREMENTS PRIOR TO SUBMITTING BID OR COMMENCING WORK.
4. THE MECHANICAL SYSTEM SHOWN SHALL BE RUN AS HIGH AS POSSIBLE. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING REQUIREMENTS WITH ALL TRADES PRIOR TO CONSTRUCTION.
5. WHERE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, COMPLY WITH ALL APPLICABLE CODES. ALL MATERIALS WITHIN THE CEILING PLENUM WILL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50.
6. WHERE THE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, THE GENERAL AND MECHANICAL CONTRACTORS SHALL VERIFY THAT THE RETURN AIR PATH BACK TO THE UNIT IS OPEN WITH A VELOCITY THROUGH ALL OPENINGS OF 400 FPM OR LESS.
7. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING AIR DEVICES AND ACCESS PANELS. OBTAIN CLARIFICATION FROM THE ARCHITECT, IF EXACT LOCATIONS ARE NOT SHOWN.
8. THE MECHANICAL CONTRACTOR SHALL COORDINATE THERMOSTAT, SENSOR, AND SWITCH LOCATIONS WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION. ALL THERMOSTATS, SENSORS, AND SWITCHES SHALL BE POSITIONED PER ADA STANDARDS OR LOCATED 48" A.F.F. UNLESS INDICATED OTHERWISE.
9. COORDINATE THERMOSTAT, SENSOR, AND SWITCH LOCATIONS WITH EXISTING CONDITIONS AND THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION. WHERE POSSIBLE MATCH LOCATION OF PREVIOUS CONTROL. PROVIDE WIRE MOLD TO CONCEAL EXPOSED CONTROL WIRING AND TUBING. COLOR TO BE SELECTED BY THE ARCHITECT.
10. BALANCE AIR SYSTEMS TO THE QUANTITIES SHOWN AND SUBMIT BALANCE REPORT(S) TO THE ARCHITECT/ENGINEER FOR REVIEW.
11. PORTIONS OF THIS BUILDING WILL BE OCCUPIED DURING THIS CONSTRUCTION PROJECT. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE SCHEDULING OF THEIR WORK WITH THE GENERAL CONTRACTOR. CLEAN UP AT THE END OF EACH DAY.
12. ACCESS DOORS SHALL BE INSTALLED IN ORDER TO PROVIDE ACCESS TO MECHANICAL SYSTEMS LOCATED ABOVE INACCESSIBLE CEILINGS, WHETHER OR NOT SHOWN ON THE DRAWINGS. ACCESS DOORS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR. ACCESS DOOR LOCATIONS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. PROVIDE 12"x12" ACCESS DOORS FOR HAND ACCESS AND 24"x24" ACCESS DOORS FOR HEAD AND SHOULDER ACCESS.

MECHANICAL HVAC NOTES

1. DUCTWORK DIMENSIONS LISTED ON THE DRAWINGS ARE CLEAR, INSIDE DIMENSIONS.
2. FLEXIBLE DUCTWORK SHALL BE INSULATED AND SHALL BE THE SAME SIZE AS THE NECK OF THE AIR DEVICE. FLEXIBLE DUCTWORK SHALL NOT EXCEED 8'-0" IN LENGTH. PROVIDE WRAPPED RIGID ROUND DUCTWORK FOR TAKEOFFS IN EXCESS OF 8'-0".
3. PROVIDE DUCT TRANSITIONS FROM EQUIPMENT CONNECTIONS TO DUCT SIZES AS SHOWN.
4. PROVIDE A FLEXIBLE CONNECTION TO THE INTAKE AND DISCHARGE OF ALL MECHANICAL EQUIPMENT HAVING ROTATING PARTS. FLEXIBLE CONNECTION SHALL COMPLY WITH ALL APPLICABLE CODES.
5. ALL DUCTWORK SHALL BE A MINIMUM 26 GAUGE SHEETMETAL, OR AS REQUIRED BY ALL APPLICABLE CODES. ALL DUCTWORK CROSSING RATED CORRIDORS SHALL BE A MINIMUM 24 GAUGE SHEETMETAL. MEET OR EXCEED SMACNA STANDARDS.
6. ALL SUPPLY, RETURN AND EXHAUST DUCTWORK SHALL BE SEALED AIRTIGHT WITH DUCT SEALANT (SMACNA SEAL CLASS "A") ALONG ALL SEAMS AND JOINTS.
7. ALL RECTANGULAR SUPPLY, RETURN AND TRANSFER DUCTWORK SHALL BE SHEETMETAL LINED WITH 1" DUCT LINER.
8. ALL EXHAUST DUCTWORK SHALL BE UNLINED SHEETMETAL, UNLESS NOTED OTHERWISE.
9. ALL CONCEALED SPIRAL ROUND DUCTWORK SHALL BE SHEETMETAL WRAPPED WITH 2" DUCT WRAP.
10. ALL UNLINED DUCTWORK THAT IS VISIBLE THROUGH THE AIR DEVICE SHALL BE PAINTED FLAT BLACK.
11. SPIN-IN FITTINGS SERVING GRILLES AND DIFFUSERS SHALL BE CONICAL WITH MANUAL VOLUME DAMPERS, UNLESS THE AIR DEVICE IS PROVIDED WITH AN OPPOSED BLADE DAMPER.
12. RECTANGULAR BRANCH DUCT TAKEOFFS SHALL HAVE 45° TAKEOFFS AND ROUND DUCT TAKEOFFS SHALL BE CONICAL.
13. ALL ELBOWS, BOTH HORIZONTAL AND VERTICAL, SHALL BE LONG RADIUS ELBOWS WHEREVER POSSIBLE, OR SHALL HAVE TURNING VANES WHERE SHOWN.
14. 12"x12" ACCESS DOORS SHALL BE PROVIDED FOR ALL MANUAL VOLUME DAMPERS LOCATED ABOVE GYPSUM BOARD CEILINGS. ALL FINAL ACCESS DOOR LOCATIONS SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
15. ALL JOB SITE DUCTWORK PRIOR TO INSTALLATION SHALL BE COVERED AND PROTECTED FROM DIRT, DUST, AND DAMAGE PER SMACNA STANDARDS.
16. ALL NEW AND REPLACEMENT ROOF MOUNTED EQUIPMENT SHALL BE LOCATED AT LEAST 10'-0" FROM THE EDGE OF THE ROOF. THE GENERAL AND MECHANICAL CONTRACTOR SHALL VERIFY AND CONFIRM THE ACTUAL INSTALLED LOCATIONS OF ALL NEW AND REPLACEMENT ROOF MOUNTED EQUIPMENT. IF THIS EQUIPMENT IS INSTALLED WITHIN 10'-0" OF THE ROOF EDGE, THE GENERAL CONTRACTOR SHALL INSTALL AN OSHA APPROVED GUARD RAIL.

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LONE TREE LIBRARY REMODEL

8827 Lone Tree Parkway, Lone Tree CO 80124

Project Number:	2016.027.01
Issue:	100% CD
Date:	11/23/2016
Drawn By:	JJG
Checked By:	PWF

Revisions:

Description Date:

Sheet title:

MECHANICAL COVER SHEET - LEGEND, GENERAL NOTES AND SHEET INDEX

M000

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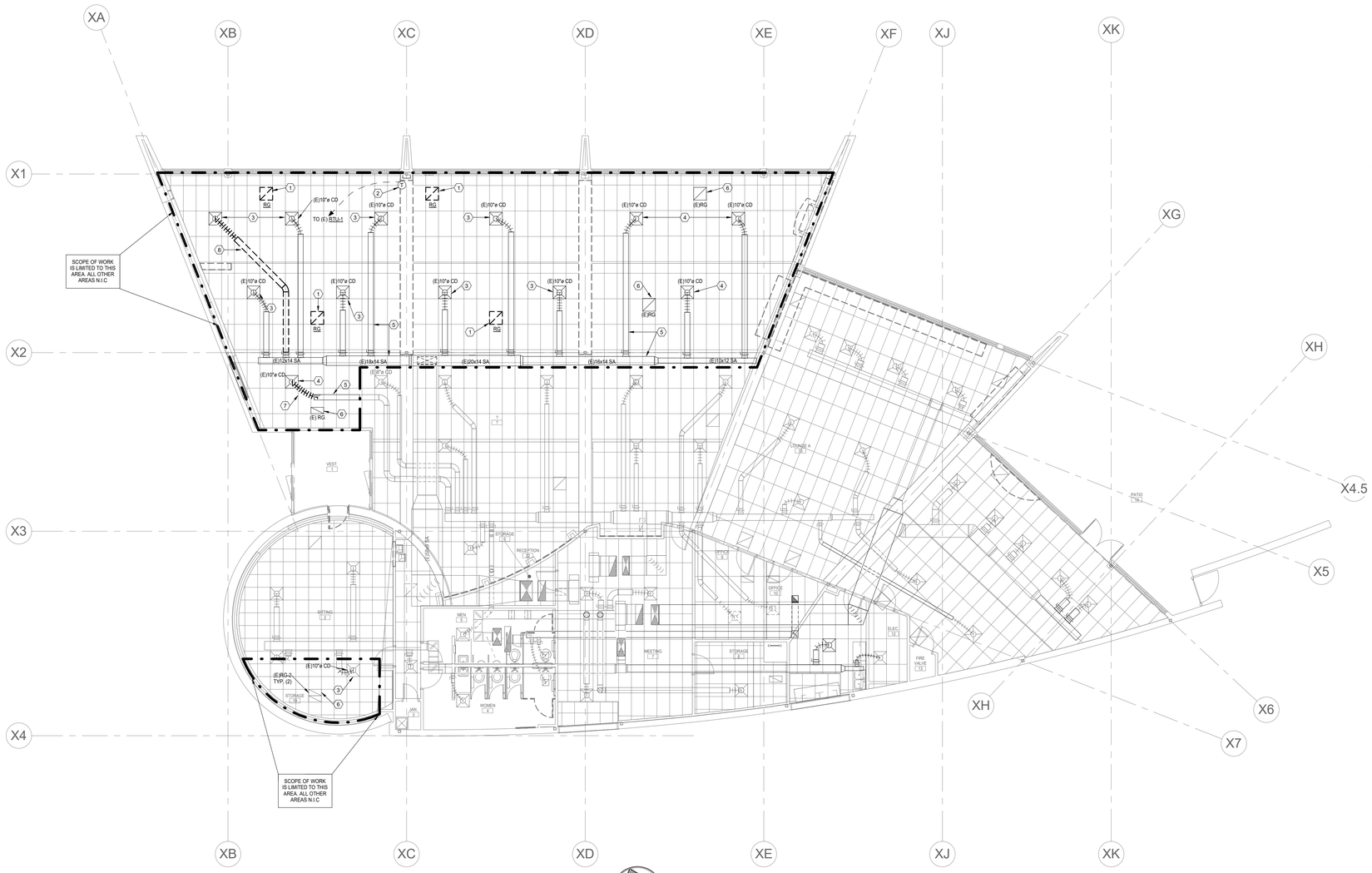

HVAC DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

HVAC DEMOLITION KEYNOTES:

1. REMOVE EXISTING RETURN GRILLE.
2. EXISTING THERMOSTAT TO BE RELOCATED. REFER TO NEW WORK PLAN FOR LOCATION.
3. EXISTING CEILING DIFFUSER TO BE RELOCATED. REFER TO NEW WORK PLAN FOR LOCATION.
4. EXISTING CEILING DIFFUSER TO REMAIN. REFER TO NEW WORK PLAN FOR BALANCING INFORMATION.
5. EXISTING DUCTWORK TO REMAIN, TYPICAL.
6. EXISTING GRD TO REMAIN, TYPICAL.
7. REMOVE EXISTING FLEX DUCT. PREPARE 10"ø BRANCH DUCT FOR RECONNECTION.
8. REMOVE EXISTING BRANCH DUCT. CAP DUCT AT MAIN

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Project Number:	2016.027.01
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HVAC AND PLUMBING DEMOLITION PLAN

M020

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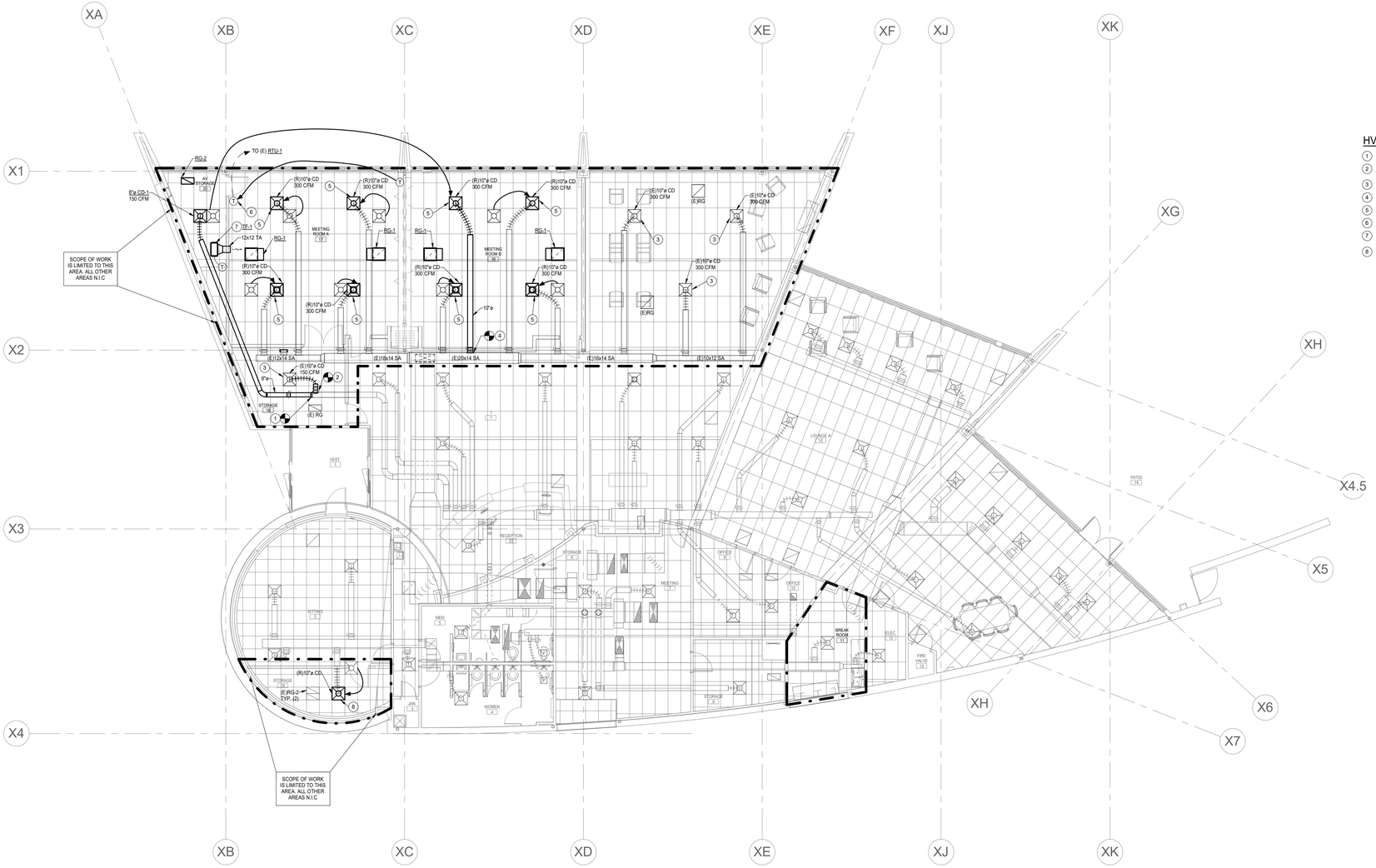

HVAC KEYNOTES:

1. PROVIDE A 10"ø TO 8"ø REDUCTION AND NEW 8"ø SA DUCT WITH MANUAL VOLUME DAMPER AS INDICATED.
2. PROVIDE A NEW 8"ø TAP OFF OF THE EXISTING 10"ø SA DUCT AS INDICATED. PROVIDE A 8"ø TO 10"ø TRANSITION AT DIFFUSER NECK.
3. BALANCE EXISTING CEILING DIFFUSER TO AIR FLOW INDICATED.
4. PROVIDE A NEW 10"ø TAKE-OFF WITH MANUAL VOLUME DAMPER AS INDICATED.
5. RELOCATE CEILING DIFFUSER AND BALANCE TO AIRFLOW INDICATED.
6. RELOCATE THERMOSTAT AS INDICATED. SET AT 48" AFF AS REQUIRED BY ADA STANDARDS.
7. TRANSFER FAN SET IN CEILING. DUCT OUTLET TO ABOVE THE ADJACENT CEILING SPACE AND OPEN END AS INDICATED.
8. RELOCATE CEILING DIFFUSER.

FIRST FLOOR HVAC PLAN

SCALE: 1/8" = 1'-0"

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COLORADO REGISTERED PROFESSIONAL ENGINEER
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11-23-16

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FIRST FLOOR HVAC AND PLUMBING PLAN

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SECTION 23 0500 - COMMON WORK RESULTS FOR HVAC

PART 1 - GENERAL

1.01 DESCRIPTION OF SYSTEMS

A. Division 23 includes but is not limited to:
1. Section 23 05 00 - Common Work Results for HVAC.
2. Section 23 05 93 - Testing, Adjusting and Balancing.
3. Section 23 07 00 - HVAC Insulation.
4. Section 23 30 00 - Air Distribution.

1.02 DESCRIPTION OF WORK

A. Work Included: Unless specified otherwise, provide all supervision, labor, materials, transportation, equipment, hauling, and services necessary for a complete and operational HVAC system. Provide all incidental items such as offsets, fittings, etc. required as part of the work even though not specifically shown on Contract Drawings or Specifications.

B. Types of mechanical related work specified in this section include the following:
1. Cutting and Patching

1.03 QUALITY CONTROL

A. Unless otherwise specifically indicated, equipment and materials shall be installed in accordance with the recommendations of the manufacturer.

1.04 EXAMINATION OF CONTRACT DRAWINGS AND SPECIFICATIONS

A. The HVAC Drawings show the general arrangement of piping, ductwork, HVAC equipment, and appurtenances, and shall be followed as closely as actual building construction and the work of other trades will permit.

B. The HVAC Contractor shall request of the Test and Balance (TAB) Contractor an early review of the Contract Documents for the purpose of identifying where proper balancing cannot be achieved. Forward a copy of the report to the HVAC engineer for review. The HVAC Contractor shall modify the system as recommended by the TAB Contractor or refer unresolved issues to the HVAC Engineer for resolution prior to ordering of ductwork and equipment. Unresolved balancing issues from untimely or incomplete application of these requirements shall be corrected in the field at no extra cost to the project.

1.05 REGULATORY REQUIREMENTS

A. Where hourly fire and smoke ratings are indicated or required, whether or not shown, provide components and assemblies meeting requirements of the American Insurance Association, Factory Mutual Insurance Association and listed by Underwriters Laboratories, Inc.

1.06 COORDINATION

A. Before purchase, fabrication, or installation of HVAC components, determine if the installation will properly fit and can be installed as contemplated without interference with structural elements or the work of other trades.

B. Locations of pipes, ducts, switches, panels, equipment, and fixtures, shall be adjusted to accommodate the work or interferences anticipated and encountered. Determine the exact route and location of each pipe and duct prior to fabrication.

C. Where major conflicts occur, contractor shall rely upon the Architect/Engineer to make final decision regarding priority of right-of-way.

D. Design Team, General Contractor and Subcontractors shall conduct a pre-installation coordination meeting for all "fit-up" above ceilings.

END OF SECTION 23 0500

SECTION 23 0593 - TESTING, ADJUSTING AND BALANCING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Complete balancing of affected air systems.

1.02 QUALIFICATIONS OF CONTRACTOR

A. At completion of balancing, the contractor shall prepare and submit a balancing report in triplicate to the Engineer for review.

B. The engineer reserves the right to spot-check data after submittal of the report.

The contractor shall mark the position of all balancing devices at completion of the balancing report.

1.03 APPROVAL OF CONTRACTOR

A. Testing, Adjusting and Balancing (TAB) firms acceptable to do the work are:
1. Air-Right, Inc.
2. Complete Mechanical Balancing.
3. Checkpoint Balance, LLC.
4. Double T Balancing Company.
5. Griffith Engineering Service Co.
6. Jedi Balancing, Inc.
7. JPG Engineering.
8. TAB Services.

1.04 REPORT OF WORK

A. Submit six (6) bound copies of the final testing and balancing report at least 15 days prior to the Mechanical Contractor's request for final inspection. All data shall be recorded on applicable reporting forms. The report shall include all operating data as listed in sections above, a list of all equipment used in the testing and balancing work, and shall be signed by the supervising engineer and affixed with his certification seal. Final acceptance of this project will not take place until a satisfactory report is received.

END OF SECTION 23 0593

SECTION 23 0700 - HVAC INSULATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Refer to Section 23 30 00: Air Distribution for lined ductwork requirements.

1.02 DESCRIPTION OF WORK

A. Types of mechanical insulation specified in this section include the following:

a. Unlined ductwork.

PART 2 - PRODUCTS

2.01 DUCTWORK INSULATION MATERIALS

A. Rigid Fiberglass Ductwork Insulation: ASTM C612, Class 1, with a minimum of R-5 when located in unconditioned spaces and aminimum or R8 when located outside the building.

B. Flexible Fiberglass Ductwork Insulation: ASTM C 553, Type II, with a minimum of R-5 when located in unconditioned spaces and a minimum or R8 when located outside the building.

C. Jackets for Ductwork Insulation: ASTM C 1136, Type I for ductwork mounted outdoors; Type II for ductwork mounted indoors.

D. Ductwork Insulation Accessories: Provide staples, bands, wires, tape, anchors, corner angles and similar accessories as recommended by insulation manufacturer for applications indicated.

E. Ductwork Insulation Compounds: Provide cements, adhesives, coatings, sealers, protective finishes and similar compounds as recommended by insulation manufacturer for applications indicated.

F. Acceptable Manufacturers:
1. Johns Manville.
2. Knauf.
3. Owens Corning.

PART 3 - EXECUTION

3.01 GENERAL

A. Inspection: Examine areas and conditions under which mechanical insulation is to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

B. R Values: Insulation R values shall be in accordance with the latest edition of the International Energy Conservation Codes and ASHRAE 90.1.

3.02 DUCTWORK SYSTEM INSULATION

A. Insulation Omitted: Do not insulate lined ductwork. Refer to Section 23 30 00 for Lined Ductwork requirements.

B. Insulate each ductwork system with one of the following types and thicknesses of insulation.
1. Rigid Fiberglass: 2" thick.

2. Flexible Fiberglass: 2" thick, application limited to concealed locations.

END OF SECTION 23 0700

SECTION 23 3000 - AIR DISTRIBUTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Types of equipment specified in this section include the following:
1. Metal Ductwork.
2. Ductwork Accessories.

1.02 TEST AND BALANCE COORDINATION

A. Prior to starting work, the contract documents shall be given to the Test and Balance contractor for his review. If there are any areas of the air distribution system that cannot be balanced, due to the configuration of the system, a Request for Clarification shall be made in a timely manner to allow revisions to the documents before the systems are installed.

PART 2 - PRODUCTS

2.01 METAL DUCTWORK

A. Galvanized Sheet Metal: Except as otherwise indicated, fabricate ductwork from galvanized sheet steel, lockforming quality; with G 90 zinc coating in accordance with ASTM A 653; and mill phosphatized for exposed locations.

1. Include ductwork accessories including fire dampers, fire/smoke dampers, manual volume dampers, flex ductwork, etc.
2. All round duct take-offs shall be conical bellmouth type. Where dampers are indicated at the take-off stand-off handles shall be provided.

2.02 DUCTWORK FABRICATION

A. Shop fabricate ductwork of gauges and reinforcement complying with SMACNA "HVAC Duct Construction Standards".

B. Fabricate duct fittings to match adjoining ducts, and to comply with duct requirements as applicable to fittings. Except as otherwise indicated, fabricate elbows with centerline radius equal to associated duct width; and fabricate to include turning vanes in elbows where shorter radius is necessary. Limit angular tapers to 30 degrees for contracting tapers and 20 degrees for expanding tapers.

C. Fabricate ductwork with duct liner in each section of duct where indicated. Laminate liner to internal surfaces of duct in accordance with instructions by manufacturers of lining and adhesive, and fasten with mechanical fasteners.

D. Factory Fabricated: At installer's option, provide factory-fabricated duct and fittings, in lieu of shop-fabricated duct and fittings. Factory fabricated duct shall not be less than 26 ga. and shall be constructed according to SMACNA standards.

2.03 GRILLES, REGISTERS AND DIFFUSERS

A. General: Except as otherwise indicated, provide manufacturer's standard air device where shown; of size, shape, capacity and type indicated; constructed of materials and components as indicated, and as required for complete installation.

B. Performance: Provide air devices that have, as minimum, temperature and velocity traverses, throw and drop, and noise criteria ratings for each size device as listed in manufacturer's current data.

C. Ceiling/Wall Compatibility: Provide air devices with border styles that are compatible with adjacent ceiling/wall systems, and that are specifically manufactured to fit into ceiling/wall construction with accurate fit and adequate support. Refer to general construction drawings and specifications for types of ceiling/wall construction which will contain each type of air device.

D. Types: Provide air device of type, capacity, and with accessories and finishes as listed on grilles, register and diffuser schedule.

E. Acceptable Manufacturers:
1. Krueger Mfg. Co.
2. Metal Aire Co.
3. Nailor Industries, Inc.
4. Price.
5. Titus Products Div.; Philips Industries, Inc.
6. Air Concepts

PART 3 - EXECUTION

3.01 INSPECTION

A. General: Examine areas and conditions under which ductwork accessories and equipment are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

3.02 INSTALLATION OF METAL DUCTWORK

A. General: Assemble and install ductwork in accordance with SMACNA Seal Class "A" and noiseless (no objectionable noise) systems, capable of performing each indicated service. Install each run with minimum number of joints. Align ductwork accurately at connections, within 1/8" misalignment tolerance and with internal surfaces smooth. Support ducts rigidly with suitable ties, braces, hangers and anchors of type which will hold ducts true-to-shape and to prevent buckling. Support vertical ducts at every floor.

B. Field Fabrication: Complete fabrication of work at project as necessary to match shop-fabricated work and accommodate installation requirements.

C. Field Modifications: Ductwork modified in the field shall maintain the same free area as shown on the Drawings. In no case shall the aspect ratio of modified ductwork exceed 4 to 1 without permission of the Engineer.

D. Electrical Equipment Spaces: Do not route ductwork through transformer vaults and their electrical equipment spaces and enclosures.

E. Penetrations: Where ducts pass through interior partitions and exterior walls, and are exposed to view, conceal space between construction opening and duct or duct insulation with sheet metal flanges of same gauge as duct. Overlap opening on 4 sides by at least 1-1/2". Fasten to duct and substrate.

1. Where ducts pass through fire-rated floors, walls, or partitions, provide firestopping between duct and substrate, in accordance with requirements of Division-07 Section "Firestopping".

F. Installation: Install metal ductwork in accordance with SMACNA HVAC Duct Construction Standards as follows:

1. All supply, return and exhaust: Galvanized sheet metal.

G. Sealant: Seal all supply, return and exhaust ductwork with duct sealant or duct cement in accordance with SMACNA HVAC Duct Construction Standards.

3.03 INSTALLATION OF DUCT LINER

A. General: Install duct liner in accordance with SMACNA HVAC Duct Construction Standards. Duct sizes shown on plans are clear inside dimensions. Increase duct sizes accordingly.

B. Extent of Duct Liner:
1. All rectangular supply air ductwork .
2. All rectangular return air ductwork.
3. All transfer air ductwork.
4. All transfer air boots.
5. Exposed spiral ductwork.
6. Where shown otherwise.

3.04 INSTALLATION OF FLEXIBLE DUCTS

A. Maximum Length: For any duct run using flexible ductwork, do not exceed 8' _ 0" extended length or as required by local authorities.

B. Installation: Install in accordance with Section III of SMACNA's, "HVAC Duct Construction Standards, Metal and Flexible".

3.05 INSTALLATION OF DUCTWORK ACCESSORIES

A. Install ductwork accessories in accordance with manufacturer's installation instructions, with applicable portions of details of construction as shown in SMACNA standards, and in accordance with recognized industry practices to ensure that products serve intended function.

B. Install turning vanes in square or rectangular 90 degree elbows in supply, return and exhaust air systems, and elsewhere as indicated.

C. Install access doors to open against system air pressure, with latches operable from either side, except outside only where duct is too small for person to enter.

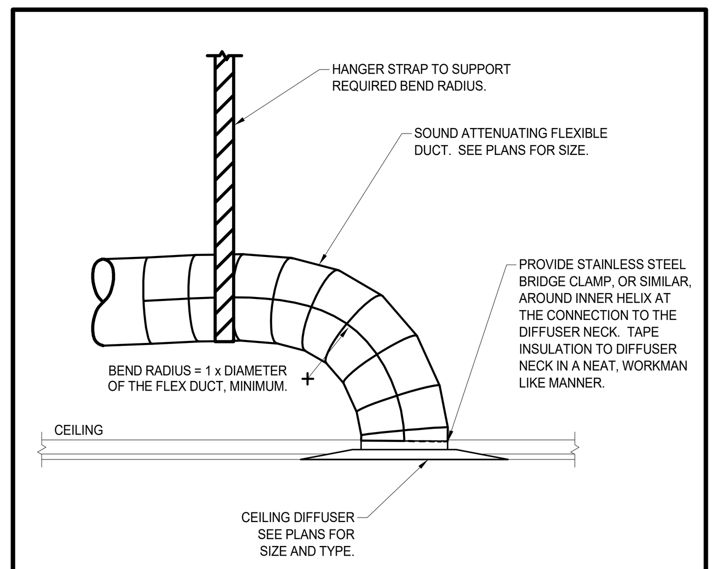
D. Install access doors for the following:
1. Access to dampers.
2. Access to fire dampers and smoke-fire dampers (one on each side of damper) in duct.

3.06 INSTALLATION OF GRILLES, REGISTERS, AND DIFFUSERS

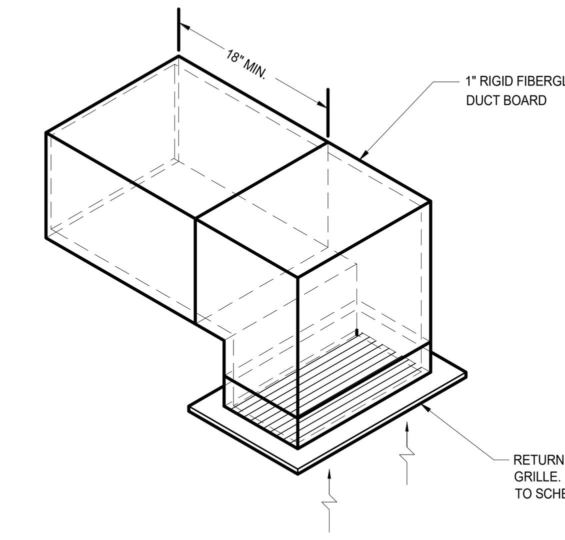
A. General: Install grilles, registers and diffusers in accordance with manufacturer's written instructions and in accordance with recognized industry practices to ensure that products serve intended functions.

B. Locate ceiling grilles, registers and diffusers, as indicated on general construction "Reflected Ceiling Plans".

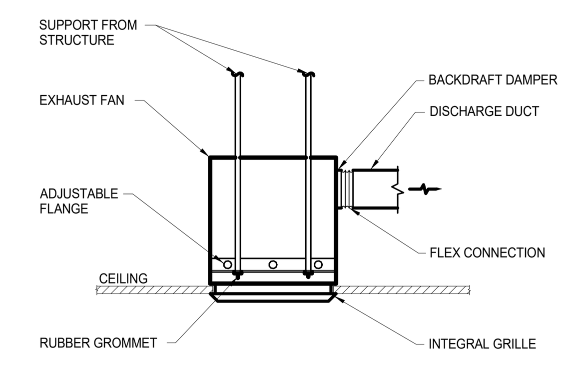
END OF SECTION 23 3000



3 M700 CEILING DIFFUSER DETAIL
SCALE: NONE



2 M700 RETURN AIR GRILLE WITH SOUND BOOT
SCALE: NONE



1 M700 CEILING EXHAUST FAN
SCALE: NONE

FAN SCHEDULE

PLAN CODE	MANUFACTURER & MODEL NO.	TYPE	SERVICE	SONES	CFM	ESP @ S.L. (IN WC)	MOTOR			DIMENSIONS (IN)			WT (LBS)	CONT.	VIB. ISOL.	DAMPER TYPE	REMARKS
							HP	RPM	V/Φ/Hz	H	W	L					
TF-1	GREENHECK SP-A700	CEILING	IT STORAGE 20	6.0	620	0.45"	350 W	1,100	115/1/60	12"	12"	24"	35	NOTE: 2	RIS	NOTE: 1	NOTE: 3,4

NOTES:
1. PROVIDE FAN WITH GRAVITY BACKDRAFT DAMPER.
2. FAN CONTROLLED BY LINE VOLTAGE, REVERSE ACTING THERMOSTAT.
3. PROVIDE INTEGRAL ELECTRIC DISCONNECT SWITCH.
4. PROVIDE FAN WITH AN INTEGRAL SPEED CONTROL.

GRILLES, REGISTERS & DIFFUSERS SCHEDULE

PLAN CODE	MANUFACTURER & MODEL NO.	SERVICE	NECK SIZE	FACE SIZE	SLOT WIDTH/ NO. OF SLOTS	VOLUME DAMPER	MATERIAL	MOUNTING TYPE	FINISH	REMARKS
CD-1	PRICE SMD	SUPPLY	AS NOTED	24"x24"	-	NO	STEEL	LAY-IN	WHITE	NOTE: 1,2
RG-1	PRICE PDDR	RETURN	18"x18"	24"x24"	-	NO	ALUMINUM	LAY-IN	WHITE	NOTE: 3
RG-2	PRICE PFRF	RETURN	NONE	24"x12"	-	NO	STEEL	LAY-IN	WHITE	

NOTES:

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HVAC SCHEDULES, DETAILS AND SPECIFICATIONS

M700

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DISTRIBUTION AND RACEWAY

MDC	MAIN DISTRIBUTION CENTER (MDC)
	SURFACE MTD PANELBOARD
	RECESSED PANELBOARD
T	TRANSFORMER
	BRANCH CIRCUIT HOMERUN
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
	CONDUIT EXPOSED OR CONCEALED IN WALL OR CEILING
	RACEWAY UP
	RACEWAY DOWN
	CAPPED CONDUIT
	CURRENT TRANSFORMER
	CIRCUIT BREAKER SWITCH
	FUSED SWITCH
	GROUNDING ELECTRODE CONDUCTOR
M	METER

FIRE ALARM

FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR/GRAPHIC MAP
FA-RPS	FIRE ALARM REMOTE POWER SUPPLY
C	CONTROL MODULE
M	MONITOR MODULE
	MANUAL PULLDOWN STATION
S	WALL MOUNTED ADA STROBE
	ADA HORN OR SPEAKER WITH STROBE
	MINI HORN / STROBE
MH	ELECTROMAGNETIC DOOR HOLD OPEN
FS	SPRINKLER FLOW SWITCH
TS	SPRINKLER TAMPER SWITCH
T	THERMAL DETECTOR
S	PHOTOELECTRIC SMOKE DETECTOR
	DUCT SMOKE DETECTOR, SUPPLY OR RETURN
TS	REMOTE INDICATING LIGHT (TEST SWITCH)
D	120V. MOTORIZED SMOKE DAMPER
RA	RESCUE ASSISTANCE PHONE
F	FIRE FIGHTERS PHONE JACK

SYSTEMS

	TTB, MDF OR IDF SYSTEM BACKBOARD
	TELECOMMUNICATION OUTLET
	FLOOR MOUNTED TELECOMMUNICATION OUTLET
	TELEVISION OUTLET
S	SPEAKER - PAGING AND OR SOUND SYSTEM - INDICATES SPEAKER ZONE
M	MICROPHONE OUTLET
V	VOLUME CONTROL
	PUSH BUTTON
	CLOSED CIRCUIT TELEVISION CAMERA
	CABLE TRAY (LENGTH AS INDICATED ON DRAWINGS)

LIGHTING FIXTURES

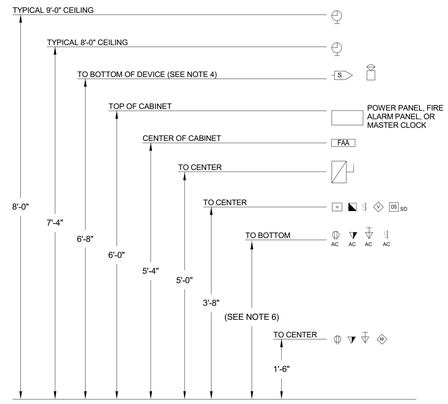
A a	LUMINAIRE TYPE, REFERENCING LUMINAIRE SCHEDULE, TYPICAL ALL FIXTURES. SUBSCRIPT, IF SHOWN, REFERENCES WALL SWITCH.
	WALL MOUNTED LUMINAIRE
	SURFACE MOUNTED LUMINAIRE
	RECESSED LUMINAIRE
	DOWNLIGHT LUMINAIRE
	SURFACE CEILING LUMINAIRE
	PENDANT LUMINAIRE
	WALLWASH LUMINAIRE
	STRIP LUMINAIRE
	SURFACE OR PENDANT TRACK LUMINAIRE
	LINEAR PENDANT LUMINAIRE (LENGTH AS INDICATED ON DRAWINGS/SCHEDULE)
	EXIT LUMINAIRE - SHADED INDICATES FACE/ DIRECTIONAL ARROWS AS SHOWN.
	BATTERY PACK EMERGENCY LUMINAIRE
	EMERGENCY LUMINAIRE - SHADED PROVIDE WITH INTEGRAL BATTERY BACKUP
K	PORCELAIN LAMP HOLDER
	STEP LIGHT TYPE LUMINAIRE
	BOLLARD OR POST TOP LUMINAIRE
	EXTERIOR AREA LIGHT

WIRING DEVICES

	DUPLEX RECEPTACLE
	FOUR PLEX RECEPTACLE
	SINGLE RECEPTACLE
W	COMBO RECEPTACLE/SWITCH
	SWITCHED DUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	FLOOR MOUNTED SPECIAL PURPOSE RECEPTACLE
	FLOOR MOUNTED RECEPTACLE DUPLEX/QUAD
SR	SURFACE RACEWAY
	CLOCK RECEPTACLE
J	JUNCTION BOX
J	WALL MOUNTED J-BOX
J	FLOOR MOUNTED JUNCTION BOX
	MOLDED CASE CIRCUIT BREAKER IN ENCLOSURE
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MAGNETIC CONTROLLER (STARTER)
	COMBINATION STARTER/DISCONNECT SWITCH
HP	MOTOR
R	RELAY
TC	TIME CLOCK
PC	PHOTOCELL
$_{TO}$	THERMAL OVERLOAD SWITCH
$	SINGLE POLE SWITCH
$_3	3-WAY SWITCH
$_4	4-WAY SWITCH
$_K	KEY OPERATED SWITCH
$_D	DIMMER SWITCH
$_{DOOR}	RECESSED DOOR SWITCH
WS(x)	LIGHTING CONTROL SYSTEM LOW VOLTAGE DIGITAL WALL STATION. (X) INDICATES INDIVIDUAL WALL STATION ADDRESS. REFER TO LIGHTING CONTROL ONELINE DRAWING.
OS S	SINGLE RELAY OCCUPANCY SENSOR/SWITCH.
OS D	DOUBLE RELAY OCCUPANCY SENSOR/SWITCH.
OS C	CEILING MOUNTED OCCUPANCY SENSOR.
OS W	WALL MOUNTED OCCUPANCY SENSOR.

ABBREVIATIONS AND SYMBOLS

A	AMPERE(S)
AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BFF	BELOW FINISHED FLOOR
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
DISC	DISCONNECT
DW	DISHWASHER
DWG(S)	DRAWING(S)
(E)	EXISTING TO REMAIN
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
(ER)	EXISTING TO BE RELOCATED
EM	EMERGENCY
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
(R)	EXISTING TO BE REMOVED
F	FUSE
FLA	FULL LOAD AMPS
FD	GARBAGE DISPOSAL
G	GROUND
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSEPOWER
IDF	INTERMEDIATE DISTRIBUTION FACILITY
IG	ISOLATED GROUND
ISC	SHORT CIRCUIT CURRENT
KVA	KILOVOLT AMPERE(S)
KW	KILOWATT(S)
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPERE(S)
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION CENTER
MDF	MAIN DISTRIBUTION FACILITY
MLO	MAIN LUGS ONLY
MTS	MANUAL TRANSFER SWITCH
MW	MICROWAVE
NC	NORMALLY CLOSED
NL	NIGHT LIGHT - SEE GENERAL NOTES
NO	NORMALLY OPEN
OAE	OR APPROVED EQUAL
OH	OVERHEAD
P	POLE
PART	PARTIAL CIRCUIT
PH	PHASE
PNL	PANEL
RCPT	RECEPTACLE
REF	REFRIGERATOR
(RL)	RELOCATED
SPD	SURGE PROTECTION DEVICE
UC	UNDER COUNTER/CABINET
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLT(S)
W	WATT(S) OR WIRE
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER
X	POOL EQUIPMENT SCHEDULE NOTATION
X	KITCHEN EQUIPMENT SCHEDULE NOTATION
X X	MECHANICAL EQUIPMENT SCHEDULE NOTATION
X	CONTROL INTENT SCHEDULE NOTATION
X	DETAIL NOTE
X	DELTA REVISION NOTE
X	ELECTRICAL WIRE SIZE
X	LIGHTING CONTROL DEVICE SCHEDULE NOTATION



NOTES:

1. WHERE MULTIPLE LINE VOLTAGE DEVICES ARE SHOWN ADJACENT TO EACH OTHER, THEY ARE ALL TO SHARE THE SAME JUNCTION BOX, UP TO FOUR GANGS.
2. WHERE MORE THAN FOUR DEVICES ARE SHOWN ADJACENT TO EACH OTHER, DEVICES ARE TO STACK VERTICALLY ABOVE ONE ANOTHER IN TWO ROWS IN AS SMALL OF GANG BOXES AS POSSIBLE. I.E. SIX DEVICES WILL USE TWO THREE GANG BOXES, FIVE DEVICES WILL USE ONE THREE GANG AND ONE TWO GANG BOX.
3. SEPARATELY GANGED DEVICES ARE NOT ALLOWED TO BE INSTALLED ADJACENT TO ONE ANOTHER HORIZONTALLY WITHIN THE SAME STUD BAY.
4. AUDIBLE/VISUAL FIRE ALARM DEVICES SHOWN ARE TO BE MOUNTED AT 90" OR 6" BELOW CEILING, WHICHEVER IS LOWER. ADA STROBES TO BE MOUNTED AT 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
5. MAXIMUM ELEVATION FOR ALL LOAD CENTER CIRCUIT BREAKERS SHALL NOT EXCEED 48" AFF, WITHIN DWELLING UNITS.
6. THE E.C. SHALL REFER TO ARCHITECTURAL ELEVATIONS TO COORDINATE ALL COUNTER HEIGHTS. ALL "AC" DEVICES SHALL HAVE BOTTOM OF BACK-BOX MOUNTED 4" ABOVE THE BACK/SIDE SPLASH.

COVERSHEET NOTES

1	THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM.
2	MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
3	MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.
4	ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS, EXCEPT AS NOTED OTHERWISE.
5	THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
6	THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS, WHICH ARE REQUIRED BY THESE AGENCIES, FOR THEIR APPROVAL.
7	THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
8	FOR ALL JOBS THAT INCLUDE DEMOLITION WORK BY THE ELECTRICAL CONTRACTOR, DURING AND AFTER DEMOLITION, EC SHALL MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING DEVICES THAT ARE TO REMAIN. EC SHALL REMOVE, RELOCATE, AND/OR REWORK ANY CONDUIT AND WIRING TO FACILITATE THE NEW CONSTRUCTION SCOPE OF WORK. FOR A LUMINAIRES THAT ARE EXISTING TO REMAIN OR EXISTING TO BE RELOCATED, EC SHALL CLEAN LENSES AND REPLACE ALL EXTINGUISHED LAMPS, UON.
9	THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
10	ALL MATERIALS, AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
11	ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ARCHITECT-DESIGNER OR THEIR REPRESENTATIVE.
12	E.C. IS TO REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ALL FIRE RATED PENETRATION INSTALLATION REQUIREMENTS. E.C. IS TO NOTIFY ENGINEER AND ARCHITECT PRIOR TO INSTALLING ANY FIXTURES WITHIN A FIRE RATED CEILING OR WALL. FIRE RATING MUST BE MAINTAINED FOR THIS TYPE OF INSTALLATION WITH DRYWALL TENTING.
13	SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT. SUBMITTALS SHALL BE IN LOGICAL GROUPS, FOR EXAMPLE, ALL LIGHTING FIXTURES, PARTIAL SUBMITTALS WILL NOT BE REVIEWED.
14	SUBMIT (3) COPIES OF THE FOLLOWING SHOP DRAWINGS FOR REVIEW.
	A. FIRE ALARM SYSTEMS
	B. LIGHT FIXTURES
	C. LIGHTING CONTROLS
	G. PROVIDE "AS-BUILT" DRAWINGS AND SUBMIT TO ARCHITECT/DESIGNER.
15	PROVIDE THE FOLLOWING INFORMATION, PER IECC 2015 C408.2.5.2 TO THE PARTY RESPONSIBLE FOR PROJECT COMMISSIONING PLAN (COMMISSIONING AGENT/ MECHANICAL ENGINEER) AND ELECTRICAL ENGINEER.
	A. CUTSHEETS FOR ALL INSTALLED LIGHTING AND LIGHTING CONTROLS.
	B. OPERATION AND MAINTENANCE MANUALS FOR EACH PIECE OF INSTALLED LIGHTING, REQUIRED ROUTINE MAINTENANCE ACTIONS, CLEANING AND RECOMMENDED RELAMPING SHALL BE CLEARLY IDENTIFIED.
	C. SCHEDULE FOR INSPECTING AND RECALIBRATING ALL LIGHTING CONTROLS. INSPECTION OF ALL LIGHTING CONTROLS SHALL BE PERFORMED PRIOR TO ELECTRICAL ENGINEER'S COMMISSIONING SITE VISIT. RECALIBRATION OF LIGHTING CONTROLS SHALL BE PERFORMED FOLLOWING SITE VISIT AND SHALL BE BASED UPON THE RECOMMENDATIONS OF THE ELECTRICAL ENGINEER.
16	ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
17	ALL NEW CIRCUIT BREAKERS FOR NEW OR EXISTING PANELBOARDS SHALL MATCH EXISTING BUILDING PANELBOARD MANUFACTURER AND BREAKER TYPE. THE CONTRACTOR SHALL PROVIDE NEW TYPE WRITTEN PANEL DIRECTORIES FOR ALL NEW PANELS AND EXISTING PANELS WHICH HAVE CHANGED. PANELBOARD SHALL BE MARKED WHERE THE SOURCE OF POWER SUPPLY ORIGINATES, AND IF SERIES COMBINATION SYSTEMS ARE UTILIZED AND THEIR LISTED AMPERE RATING.
18	DO NOT SHARE NEUTRAL CONDUCTORS FOR MULTIWIRE BRANCH CIRCUITS. WHERE THE E.C. PROPOSES THE USE OF SHARED NEUTRAL CONDUCTORS OR SHARED NEUTRAL CONDUCTORS ARE REQUIRED (SUCH AS POWERED FURNITURE SYSTEMS), HANDLE TIES SHALL BE PROVIDED ON THE CIRCUIT BREAKERS, WITH SHARED NEUTRALS, SUCH THAT IT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS. ALL HANDLE TIES ARE REQUIRED TO BE INDICATED ON THE PANELBOARD SHOP DRAWINGS.
19	SHOULD ACTUAL FIELD CONDITIONS REQUIRE INDICATED CIRCUIT DESIGNATIONS TO VARY, INDICATE THE CIRCUIT NUMBER USED ON THE "AS-BUILT" DRAWINGS.
20	PROVIDE COMPLETE METAL RACEWAY SYSTEMS AND ENCLOSURES FOR ALL WIRING THROUGHOUT THE EXTENT OF THE REQUIRED DISTRIBUTION SYSTEM.
	A. UTILIZE ELECTRICAL METALLIC TUBING (EMT), MINIMUM SIZE OF 3/4", IN THE FOLLOWING LOCATIONS:
	- POWER CIRCUIT HOMERUN
	- BRANCH CIRCUITS IN CONCEALED OR EXPOSED LOCATIONS
	- TELEPHONE/DATA/CATV ROUGH-IN
	B. UTILIZE METAL-CLAD CABLE (MC) IN THE FOLLOWING LOCATIONS:
	- BRANCH CIRCUIT IN CONCEALED LOCATIONS
	- FINAL CONNECTION TO RECESSED LIGHTING FIXTURES
21	ALL NEW CIRCUITS SHALL HAVE A GROUND WIRE INSTALLED.
22	ALL WIRING NOT INSTALLED IN CONDUIT AND INSTALLED IN THE CEILING SPACE SHALL BE PLENUM RATED.
23	ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SPECIAL OUTLET BOXES THAT MAY BE REQUIRED TO ENCLOSE RECEPTACLES.
24	EACH SWITCH, LIGHT, RECEPTACLE AND OTHER MISCELLANEOUS DEVICE SHALL BE PROVIDED WITH A GALVANIZED OR PRESSED STEEL OUTLET BOX OF THE KNOCKOUT TYPE, OF NOT LESS THAN NO. 14 U.S. GAUGE STEEL. CONDUITS SHALL BE FASTENED WITH LOCKNUTS AND BUSHINGS AND ALL UNUSED KNOCKOUTS MUST BE LEFT SEALED. THERE MUST BE SUFFICIENT ROOM FOR WIRES AND BUSHINGS AND DEEP BOXES SHALL BE INSTALLED WHERE REQUIRED. BOXES SHALL BE SECURELY AND ADEQUATELY SUPPORTED.
25	IN EXPOSED AND SUSPENDED CEILING APPLICATIONS, ROUTE CONDUIT AS CLOSE TO STRUCTURAL SLAB OR DECK AS POSSIBLE, AND SUPPORT CONDUIT AND JUNCTION BOXES DIRECTLY FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SYSTEM HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE.
26	ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE, AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS. GENERAL CONTRACTOR SHALL PAIN CONDUIT TO MATCH ADJACENT FINISHES.
27	WHERE FLOOR FITTINGS REQUIRE PENETRATION OF THE FLOOR SLAB, THEY SHALL BE STANDARD DEVICE LISTED BY UL FOR THE PURPOSE AND HAVE A UL FIRE RATING EQUAL TO THE FLOOR RATING. FLOOR SERVICE BOXES SHALL BE MODULAR, ADJUSTABLE FLUSH TYPE, DUAL SERVICE UNITS SUITABLE FOR WIRING METHOD USED. COMPARTMENT BARRIERS SHALL SEPARATE POWER FROM LOW VOLTAGE CABLING. PROVIDE RECTANGULAR SERVICE PLATE WITH SATIN FINISH.
28	ALL RECEPTACLES SHALL BE SPECIFICATION GRADE NEMA 5-20R, UNLESS OTHERWISE NOTED.
29	ALL LIGHT SWITCHES SHALL BE SPECIFICATION GRADE, QUIET OPERATION RATED 120/277 VOLT, 20 AMPS, UNLESS OTHERWISE NOTED.
30	ALL FACE PLATE AND DEVICE COLORS SHALL BE APPROVED BY ARCHITECT OR OWNER/LEASEE.
31	PROVIDE LUMINAIRES SHOWN AS SHADED WITH EMERGENCY BATTERY BALLASTS. EMERGENCY LUMINAIRES SHALL SENSE UNSWITCHED POWER TO THE SPACE AND OPERATED AUTOMATICALLY UPON LOSS OF NORMAL POWER. ALL SHADED LUMINAIRES WITH 2' AND 4' LAMPS OR LONG BIAX LAMPS SHALL HAVE ONE (1) 90 MINUTE, TWO LAMP, 1400 LUMEN EMERGENCY BALLAST. ALL SHADED LUMINAIRES WITH COMPACT FLUORESCENT LAMPS SHALL HAVE A FACTORY INSTALLED 90 MINUTE EMERGENCY BALLAST. ALL EMERGENCY LUMINAIRES SHALL HAVE REMOTE TEST SWITCHES AND VISIBLE INDICATING LIGHTS. CONNECT THE EMERGENCY BATTERY BALLAST TO THE UN-SWITCHED LEG OF THE LIGHTING CIRCUIT INDICATED.
32	ALL BATTERY BACKUP EMERGENCY LIGHTING AND EXIT LIGHTS SHALL BE WIRED AHEAD OF ANY LOCAL SWITCHING, UON.
33	PROVIDE OWNER WITH A COMPLETE LISTING OF ALL LAMPS UTILIZED ON THE PROJECT INCLUDING MANUFACTURER AND CATALOG INFORMATION. PROVIDE A SUGGESTED SOURCE, INCLUDING CONTACT NAME AND PHONE NUMBER, FOR REORDERING.
34	THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHTING.
35	FINAL LAYOUT AND QUANTITY OF ALL FIRE ALARM DEVICES SUBJECT TO APPROVAL OF LOCAL AUTHORITY HAVING JURISDICTION.
36	THE POWER AND CONTROL REQUIREMENTS FOR ALL EQUIPMENT CONNECTIONS SHALL BE CONFIRMED WITH APPROVED SHOP DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN. FINAL POWER REQUIREMENTS, DIMENSIONED ROUGH-IN LOCATIONS, LOW VOLTAGE SYSTEM CONNECTIONS, ETC. SHALL BE CONFIRMED AND MODIFIED AS REQUIRED.
37	ALL DEVICES IN OR ABOVE COUNTERS SHALL HAVE LOCATIONS AND MOUNTING HEIGHTS CONFIRMED WITH ARCHITECTURAL ELEVATIONS & OWNER PRIOR TO ROUGH-IN. ANY ADJUSTMENTS TO MOUNTING HEIGHTS REQUIRED BY LACK OF COORDINATION WILL BE AT THE CONTRACTOR'S EXPENSE.
38	ALL EXISTING ELECTRICAL SERVICES NOT SPECIFICALLY INDICATED TO BE REMOVED OR ALTERED SHALL REMAIN AS THEY PRESENTLY EXIST.
39	G.C. SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT. TURN EQUIPMENT OVER TO OWNER AS INDICATED OR RECYCLE/DISCARD ALL EQUIPMENT AS REQUIRED. E.C. SHALL BE RESPONSIBLE FOR DISCONNECTING PRIMARY SERVICE AND TEMPORARY POWER.
40	CONTRACTOR TO CONDUCT FUNCTIONAL TESTING OF LIGHTING CONTROLS EQUIPMENT AS REQUIRED BY IECC 2012/2015, SECTION C408.3. AFTER THIS TESTING IS OBSERVED AND COMPLETED, THE REGISTERED DESIGN PROFESSIONAL OR COMMISSIONING AUTHORITY SHALL PROVIDE DOCUMENTATION TO THE AHJ THAT CERTIFIES THAT THE INSTALLATION MEETS THE DOCUMENTED PERFORMANCE CRITERIA OF SECTION C405.

SHEET LIST

SHEET		REVISION	
NUMBER	NAME	DATE	DESCRIPTION
E000	ELECTRICAL COVER SHEET		
E010	EXISTING/DEMO ELECTRICAL POWER PLAN		
E020	EXISTING/DEMO LIGHTING REFLECTED CEILING PLAN		
E100	ELECTRICAL POWER PLAN		
E200	LIGHTING REFLECTED CEILING PLAN		
E600	ELECTRICAL ONE LINE DIAGRAM		

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LONE TREE LIBRARY REMODEL

8827 Lone Tree Parkway, Lone Tree CO 80124

Project Number:	3480.00
Issue:	FOR REVIEW
Date:	2016-11-11
Drawn By:	SCK
Checked By:	KMD

Revisions:

Description Date:

Sheet title:

ELECTRICAL COVER SHEET

E000

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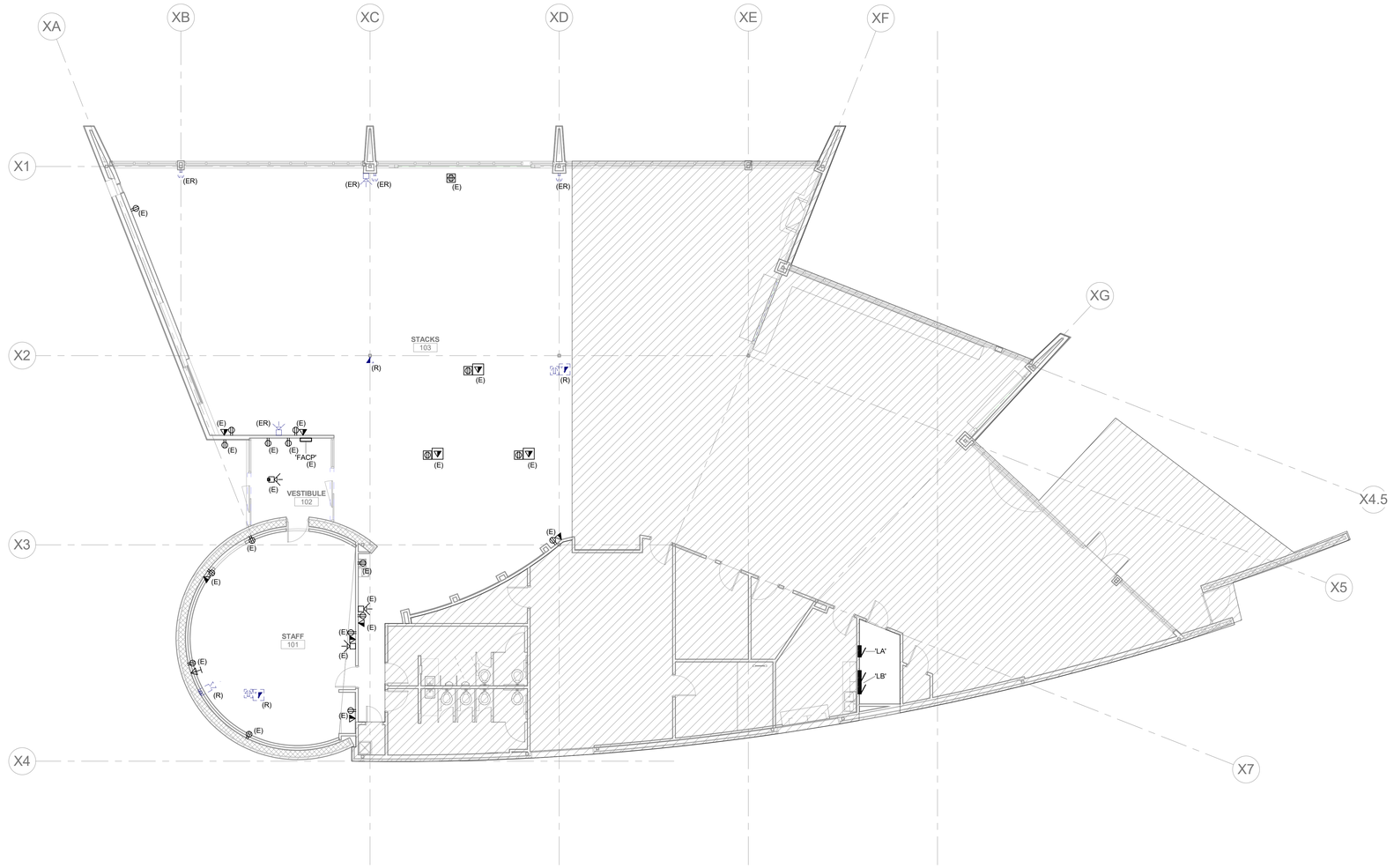

1 FIRST FLOOR EXISTING POWER PLAN
1/8" = 1'-0"

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT

ELECTRICAL DEMOLITION REQUIREMENTS

1. THE BASIS OF THESE DRAWINGS WERE SITE OBSERVATIONS, ORIGINAL BUILDING DRAWINGS AND VARIOUS OTHER SOURCES. EVERY ATTEMPT HAS BEEN MADE TO DOCUMENT THE ACTUAL CONDITIONS. HOWEVER, THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS, THE BUILDING'S EXISTING CONDITION AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
2. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
3. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT. DISCARD ALL EQUIPMENT AS REQUIRED, UNLESS NOTED OTHERWISE.
4. EXISTING DEVICES NOT NOTED AS EXISTING (E) OR INDICATED ON PLANS SHALL REMAIN, AS THEY PRESENTLY EXIST. FOR DEMOLISHED DEVICES IN WALLS WHICH ARE TO REMAIN, THE ELECTRICAL CONTRACTOR SHALL INSTALL A BLANK FACE PLATE ON THE BACKBOX. FOR DEMOLISHED DEVICES INSTALLED IN THE FLOOR, THE ELECTRICAL CONTRACTOR SHALL CUT THE FLOOR BOX FLUSH WITH THE FLOOR AND FILL WITH CONCRETE; COORDINATE WITH THE GENERAL CONTRACTOR.
5. THE DEMOLITION OF SOME DEVICES MAY INTERRUPT POWER TO DEVICES DOWN STREAM. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR REWORKING THESE CIRCUITS TO MAINTAIN POWER TO THE DOWN STREAM DEVICES WHICH WILL REMAIN.
6. ALL UNENERGIZED/DEMOLISHED CIRCUITRY SHALL HAVE THE CONDUCTORS REMOVED FROM THE CONDUIT AND THE CONDUIT SHALL BE MARKED "EMPTY" WITH INDELIBLE MARKER.

PROJECT TRUE

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aedesign-inc.com Project #: 3480.00

LONE TREE LIBRARY REMODEL

8827 Lone Tree Parkway, Lone Tree CO 80124

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EXISTING/DEMO ELECTRICAL POWER PLAN

E010

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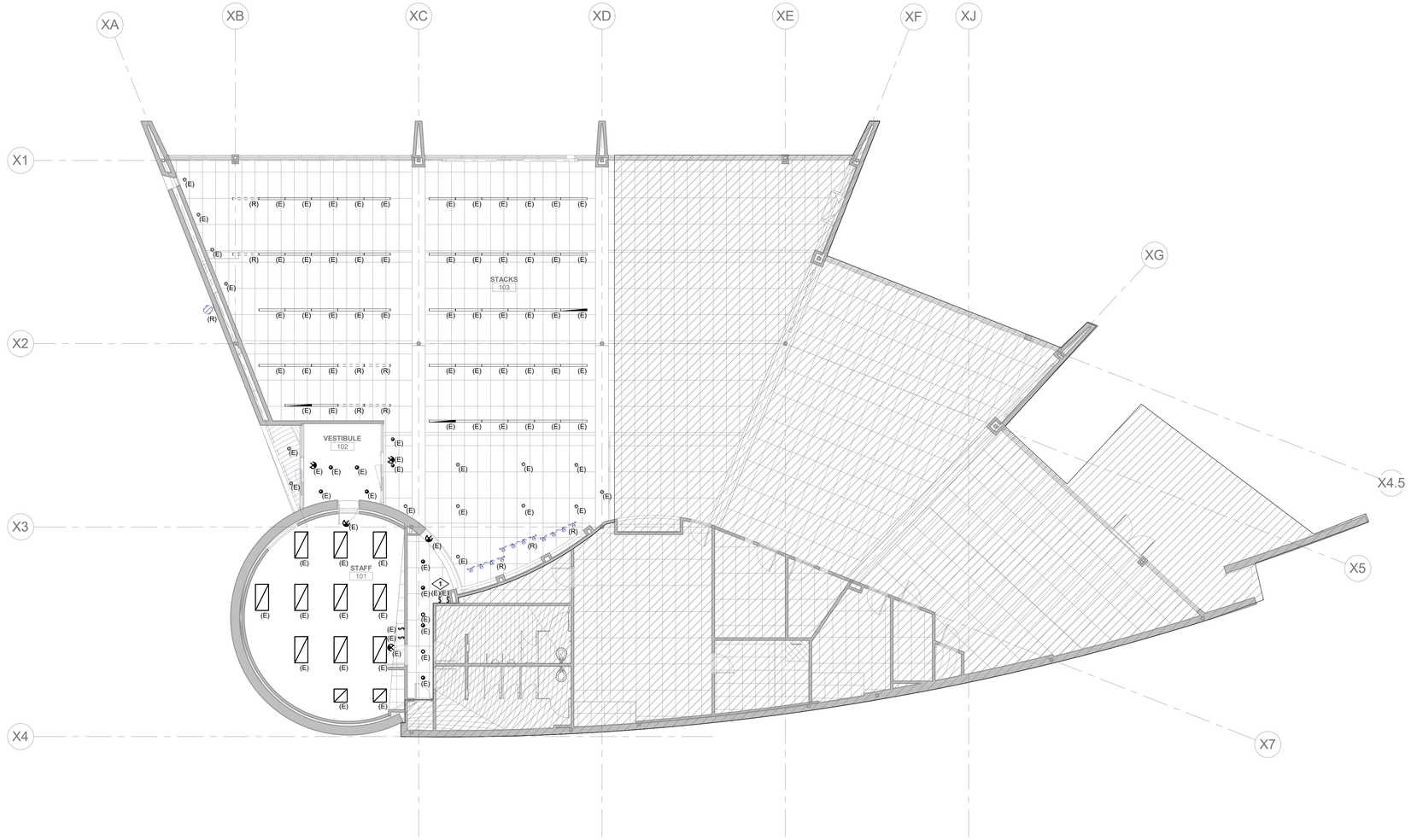

1 FIRST FLOOR EXISTING LIGHTING PLAN
1/8" = 1'-0"

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	EXISTING SWTICH BANK FOR SWITCHES "a" THROUGH "p". REUSE ANY ABANDONED SWITCHES FOR THE ADDED SWITCHLEGS. LABEL ALL SWITCHES ON SWITCHBANK.

ELECTRICAL DEMOLITION REQUIREMENTS

1. THE BASIS OF THESE DRAWINGS WERE SITE OBSERVATIONS, ORIGINAL BUILDING DRAWINGS AND VARIOUS OTHER SOURCES. EVERY ATTEMPT HAS BEEN MADE TO DOCUMENT THE ACTUAL CONDITIONS. HOWEVER, THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS, THE BUILDING'S EXISTING CONDITION AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
2. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
3. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT. DISCARD ALL EQUIPMENT AS REQUIRED, UNLESS NOTED OTHERWISE.
4. EXISTING DEVICES NOT NOTED AS EXISTING (E) OR INDICATED ON PLANS SHALL REMAIN, AS THEY PRESENTLY EXIST. FOR DEMOLISHED DEVICES IN WALLS WHICH ARE TO REMAIN, THE ELECTRICAL CONTRACTOR SHALL INSTALL A BLANK FACE PLATE ON THE BACKBOX. FOR DEMOLISHED DEVICES INSTALLED IN THE FLOOR, THE ELECTRICAL CONTRACTOR SHALL CUT THE FLOOR BOX FLUSH WITH THE FLOOR AND FILL WITH CONCRETE; COORDINATE WITH THE GENERAL CONTRACTOR.
5. THE DEMOLITION OF SOME DEVICES MAY INTERRUPT POWER TO DEVICES DOWN STREAM. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR REWORKING THESE CIRCUITS TO MAINTAIN POWER TO THE DOWN STREAM DEVICES WHICH WILL REMAIN.
6. ALL UNENERGIZED/DEMOLISHED CIRCUITRY SHALL HAVE THE CONDUCTORS REMOVED FROM THE CONDUIT AND THE CONDUIT SHALL BE MARKED "EMPTY" WITH INDELIBLE MARKER.

PROJECT TRUE

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LONE TREE LIBRARY REMODEL

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EXISTING/DEMO LIGHTING REFLECTED CEILING PLAN

E020

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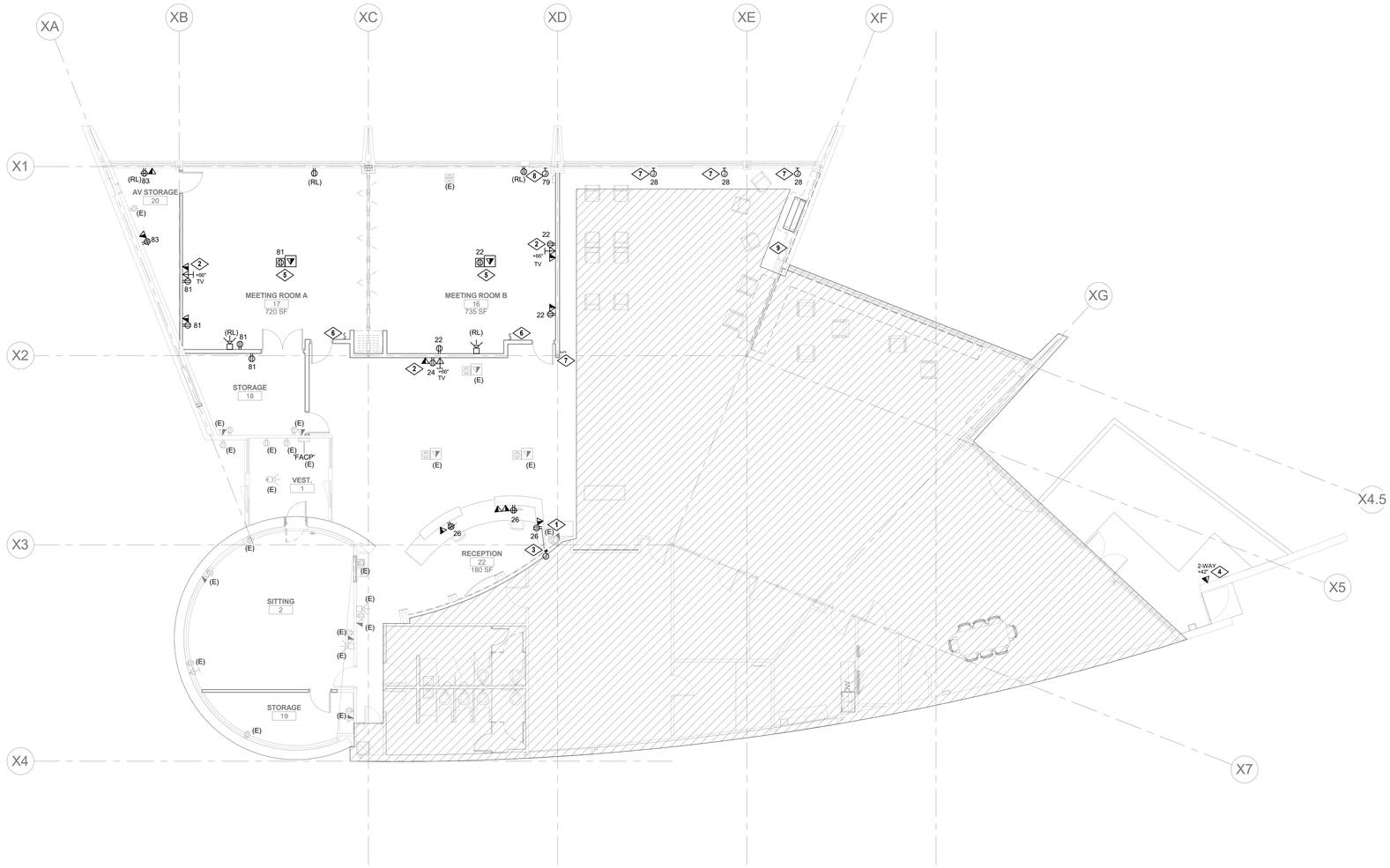

1 FIRST FLOOR POWER PLAN
1/8" = 1'-0"

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	EXISTING POWER AND DATA TO BE UTILIZED FOR LIBRARY CHECK-OUT SYSTEM. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION.
2	COORDINATE EXACT LOCATION FOR T.V. IN FIELD WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
3	CONDUIT SHALL BE ROUTED INTO DESK AND TO BE COORDINATED WITH MILLWORK INSTALLER.
4	JUNCTION BOX FOR AREA OF REFUGE TWO-WAY COMMUNICATION SYSTEM STATION PER IBC 1007.8. COMMUNICATION SYSTEM FURNISHED AND INSTALLED BY OTHERS. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH FIRE ALARM EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.
5	PROVIDE HUBBEL 6-INCH POKE THROUGH MODEL-S1R6PTFIT1 OR APPROVED EQUAL. ARCHITECT/OWNER TO COORDINATE SUB-PLATE CONFIGURATION AND FEATURES AND EXACT LOCATION PRIOR TO INSTALLATION.
6	PROVIDE CONTROL FOR MOTORIZED SHADES.
7	PROVIDE J-BOX AND CONTROL FOR MOTORIZED SHADES AS ADD-ALTERNATE. COORDINATE EXACT LOCATION AND QUANTITY WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
8	TYPICAL. PROVIDE J-BOX FOR MOTORIZED SHADES. COORDINATE EXACT LOCATION AND QUANTITY WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
9	RELOCATE GAS FIRE PLACE ON/OFF SWITCH TO NEW BUILT OUT WALL AS ADD ALTERNATE. SEE ARCHITECTS DRAWINGS FOR MORE INFORMATION.

GENERAL NOTES

A	UNLESS OTHERWISE NOTED, ALL CIRCUIT NUMBERS INDICATED ON THIS SHEET SHALL REFER TO CIRCUIT ORIGINATING IN PANELBOARDS BASED UPON THE FOLLOWING CONVENTION, (THIS SHEET ONLY): # = CIRCUIT TO PANEL 'LB'

PROJECT TRUE

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brsarch.com

COLORADO REGISTERED PROFESSIONAL ENGINEER
KIRK MICHAEL DRODZ
35717
11/23/16

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ELECTRICAL POWER PLAN

E100

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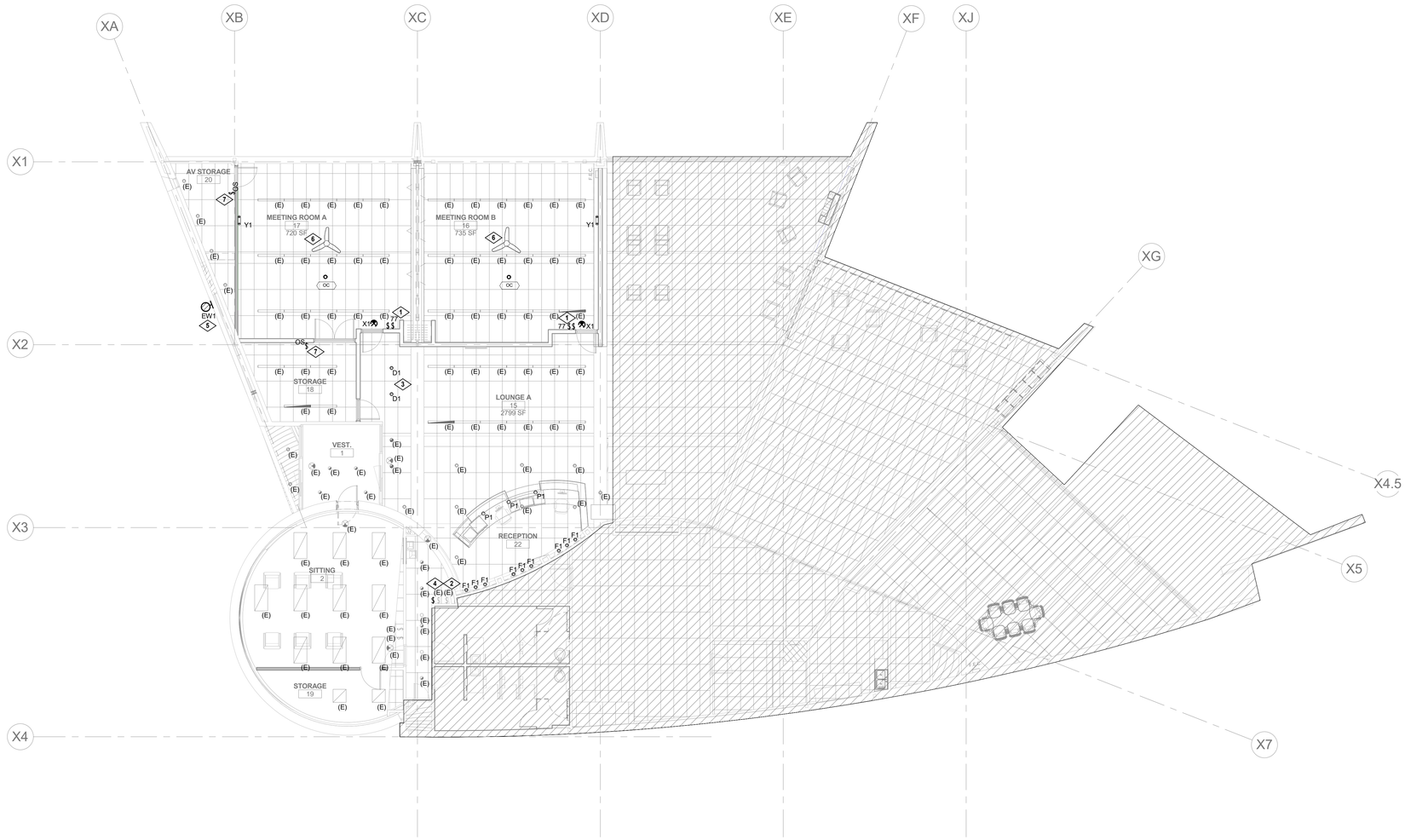

1 FIRST FLOOR LIGHTING PLAN
1/8" = 1'-0"

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	CONTRACTOR TO DISCONNECT FROM BUILDING CONTROL SYSTEM AND CONTROL LOCALLY AS SHOWN. PROVIDE SWITCHING FOR CEILING FAN. SUPPLY CEILING MOUNTED OCC SENSOR LUTRON MODEL: LOS-CDT-1000 OR APPROVED EQUAL.
2	EXISTING SWTICH BANK FOR SWITCHES "a" THROUGH "p". REUSE ANY ABANDONED SWITCHES FOR THE ADDED SWITCHLEGS. LABEL ALL SWITCHES ON SWITCHBANK.
3	TIE TWO (2) D1 FIXTURES INTO EXISTING 120V LIGHTING CIRCUIT.
4	PROVIDE NEW SWITCH FOR THREE (3) P1 AND THREE (3) F1 LIGHT FIXTURES. REUSE CIRCUIT FROM DEMO OF TRACK LIGHTING.
5	EXTERIOR WALL MOUNTED EW1 TO BE AN ADD ALTERNATE. REUSE EXISTING CONTROL AND WIRE FOR NEW EW1.
6	PROVIDE FANIMATION ZONIX RP4650 FAN OR APPROVED EQUAL. ARCHITECT/OWNER TO COORDINATE EXACT LOCATION PRIOR TO INSTALL.
7	CONTRACTOR TO DISCONNECT FROM BUILDING CONTROL SYSTEM AND CONTROL LOCALLY AS SHOWN WHILE MAINTAINING THE SAME CIRCUITRY. SUPPLY 0-10V OCC PIR SENSOR LUTRON MODEL: MS-Z101 OR APPROVED EQUAL.

GENERAL NOTES

A	ALL FIXTURES WITH HATCHING AND/OR DESIGNATED AS 'EM' SHALL BE PROVIDED WITH INTEGRAL BATTERY BACKUP. BATTERY SHALL ENGAGE ONLY AFTER COMPLETE LOSS OF POWER TO THE CIRCUIT.
B	CIRCUIT ALL EMERGENCY LIGHTING AND EXIT SIGNS TO NEAREST LINE VOLTAGE CIRCUIT, AHEAD OF ALL SWITCH LEGS.
C	UNLESS OTHERWISE NOTED, ALL CIRCUIT NUMBER INDICATED ON THIS SHEET SHALL REFER TO CIRCUIT ORIGINATING IN PANELBOARDS OR RELAY PANELS BASED ON THE FOLLOWING CONVENTION, (THIS SHEET ONLY): TBD-# = CIRCUIT TO 'TBD'

PROJECT TRUE

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COLORADO REGISTERED PROFESSIONAL ENGINEER
KIMBERLY MARIE DROSTE
35717
11/23/16

AE DESIGN
Integrated Lighting and Electrical Solutions
1900 Wazee Street #350 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 3480.00

LONE TREE LIBRARY REMODEL

8827 Lone Tree Parkway, Lone Tree CO 80124

Project Number:	3480.00
Issue:	FOR REVIEW
Date:	2016-11-11
Drawn By:	SCK
Checked By:	KMD

Revisions:

Description	Date:

Sheet title:

LIGHTING REFLECTED CEILING PLAN

E200

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LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOGUE NUMBER	VOLTAGE	LAMP QUAN.	LAMP WATTAGE	LAMP	MAX WATTAGE	DIMMING	LOCATION	BOF/RFD/OFH	NOTES
D1	CEILING RECESSED 8" DIA 1500 LUMEN DOWNLIGHT, 3500K LED	PORTFOLIO	LD8A-1-D010TE-ER8A-15-8-35-8LM1-H	120	1	23 W	LED	23 VA	N/A	CEILING RECESSED	RFD = 8-5/8"	
EW1	EXTERIOR WALLPACK WITH EMERGENCY	GARDCO	121-16-530-WW-G3-3-EBPC-UNV-DD-F1-BZ	120	1	28 W	LED	20 VA	N/A	EXTERIOR WALL MOUNTED	SEE NOTES	FIXTURE TO BE AN ADD ALTERNATE AND PLACED IN EXISTING LOCATION
F1	NICHE RECESSED, 3.15" DIA 160 LUMEN ADJUSTABLE PUCK, 3500K LED	LUMINII	CAB3-30K-17-SL / DJB-8-350-110-ND	120	1	8 W	LED	8 VA	N/A	NICHE RECESSED	RFD = 1-2/3"	
P1	DECORATIVE PENDANT, BRUSHED ALUMINUM FINISH, 2700K LED	TECH LIGHTING	700-TD-HNKGPA-S-LED827	120	1	19 W	LED	19 VA	N/A	RECEPTION PENDANT	SEE NOTES	ARCHITECT TO CONFIRM FIXTURE SUSPENSION HEIGHT
X1	EXIT SIGN WITH GREEN LETTERS AND BATTERY PACK	SURE-LITES	LPX-7-WGS11				LED	0 VA	N/A	CEILING SURFACE	OFH = 7'-1/2"	
Y1	WALL MOUNTED EMERGENCY BUG EYE	SURE-LITES	APEL				LED	0 VA	N/A	WALL MOUNTED	BOF = 8'-0"	

MDP - ELECTRICAL DEMAND LOAD SUMMARY

JOB NUMBER: #3480.00

400A SERVICE: 240/120V, 1-PHASE, 3-WIRE

EXISTING LOAD:	PANEL 'LA' 326.0 KVA
	PANEL 'LB' 362.0 KVA
TOTAL CONNECTED LOAD:	688.0 KVA
TOTAL AMPS @ 240V/1PH:	2,867 AMPS
TOTAL AMPS:	2,867 AMPS

LB (EXISTING)

VOLTAGE L-L:	240	LOCATION:	ELEC. 113
VOLTAGE L-N:	120	BUS RATING:	400 AMPS
TYPE:	1PH/3W	MAIN CB:	MLO
MOUNTING:	SURFACE	S.C. RATING:	10K AIC
NOTES:	EXISTING	FED FROM:	

CIR. NO	CCT TYPE	LOAD VA	LOAD DESCRIPTION	CIRCUIT BRKR POLE	CIRCUIT BRKR TRIP	BUS	CIRCUIT BRKR TRIP	CIRCUIT BRKR POLE	LOAD DESCRIPTION	LOAD VA	CCT TYPE	CIR NO
1	L	1120	UPLIGHTS	1	20	A	20	1	CONF RM UPLIGHTS	1920	L	2
3	L	1120	DOWNLIGHTS	1	20	B	20	1	CONF RM UPLIGHTS	1920	L	4
5	E	300	POWERWAL	1	20	A	20	1	CONF RM DOWNLIGHTS	1920	L	6
7			SPARE	1	20	B	20	1	TLT/WK RM LIGHTS	1460	L	8
9	L	1680	UPLIGHTS	1	20	A	20	1	OFFICE LIGHTS	1580	L	10
11	L	1680	DOWNLIGHTS	1	20	B	20	1	SPARE			12
13	L	1574	UPLIGHTS	1	20	A	20	1	SPARE			14
15	L	1604	DOWNLIGHTS	1	20	B	20	1	PARKING SEC LIGHTS	1920	L	16
17	L	1820	UPLIGHTS	1	20	A	20	1	PARKING NIGHT LIGHTS	1920	L	18
19	L	1820	DOWNLIGHTS	1	20	B	20	1	PARKING LOT LIGHTS	1920	L	20
21	L	1452	UPLIGHTS	1	20	A	**20(*)**	**1**	**RECEPT RM 16**	**720**	**R**	22
23	L	1532	DOWNLIGHTS	1	20	B	**20(*)**	**1**	**RECEPT LOBBY TV**	**180**	**R**	24
25	R	1440	RECEPT	1	20	A	**20(*)**	**1**	**RECEPT REC DESK**	**900**	**R**	26
27	R	1440	RECEP1	1	20	B	**20(*)**	**1**	**MOTORIZED SHADES - 2.**	**1500**	**M**	28
29	L	1302	ENTRY LIGHTS	1	20	A			BUSSED			30
31	L	1000	READING DOWNLIGHTS	1	20	B			BUSSED			32
33	L	600	WALL WASH	1	20	A			BUSSED			34
35	L	1270	EMERGENCY	1	20	B			BUSSED			36
37	L	1920	FLOOD LIGHTS	1	20	A			BUSSED			38
39	R	1920	TVSS	1	20	B			BUSSED			40
41	R	1920	TVSS	1	20	A			BUSSED			42
43	R	1080	FLOOR RECEPT	1	20	A	20	1	ROOF RECEPT & EF1	960	R	44
45	R	1080	FLOOR RECEPT	1	20	B	30	2	EWH WATER HEATER	5000	E	46
47	R	1440	RECEPT	1	20	A	20	1	SPARE			48
49	R	540	RECEPT	1	20	B	20	1	IRRIGATION CONTROL	500	E	50
51	R	720	RECEPT	1	20	A	20	1	SPARE			52
53	R	900	RECEPT	1	20	B	20	1	REFRIG	1100	KE	54
55	R	360	DESK RECEPT PRINT	1	20	A	20	1	FREEZER	1100	KE	56
57	R	360	DESK RECEPT PRINT	1	20	B	20	1	TIMECLOCK/PC	300	E	58
59	R	1080	FLOOR RECEPT	1	20	A	20	1	DRINK FOUNT	300	E	60
61	R	1260	FLOOR RECEPT	1	20	B	20	1	FIRE ALARM PANEL	300	E	62
63	R	360	FLOOR RECEPT	1	20	A	20	1	SPARE			64
65	R	1920	PHONE RM	1	20	B	20	1	MICROWAVE	1920	E	66
67	R	1440	RECEPT	1	20	A	20	1	COFFEE	1000	E	68
69	R	1440	RECEPT	1	20	B	20	1	SPARE			70
71	R	1440	RECEPT MTG RM	1	20	A	20	1	RECEPT	1440	R	72
73	R	1440	RECEPT	1	20	B	20	1	RECEPT	1440	R	74
75			BUSSED	1	20	A	20	1	PHONE BOARD	300		76
77	**M**	**400**	**CLG FANS**	**1**	**20(*)**	B	20	1	COPIER	1000	E	78
79	**M**	**1500**	**MOTORIZED SHADES**	**1**	**20(*)**	A	20	1	PHOTOVOLTAIC	1920	E	80
81	**R**	**900**	**RECEPT RM 17**	**1**	**20(*)**	B	20	1	BACK FEED BREAKER	1920	E	82
83	**R**	**720**	**RECEPT RM 20**	**1**	**20(*)**	A	20	1	SPARE			84

CCT TYPE: L=LIGHTING, R=RECEPTACLE, M=MOTOR, LM=LARGEST MOTOR, E=EQUIPMENT, KE=KITCH EQUIP, S=SUBFEED PANEL

CCT TYPE:	LOAD	MULT	DEMANDED LOAD	
LIGHTING:	36054	1.25	45068	VA
RECEPTACLE:	10000	1.0	10000	VA
OVER 10K:	20840	0.5	10420	VA
MOTOR:	3400	1.0	3400	VA
LGST MOTOR:	0	1.25	0	VA
EQUIPMENT:	14460	1.0	14460	VA
KITCH EQUIP:	2200	1	2200	VA
SUBFEED PNL:	0	1.0	0	VA

TOTAL CONNECTED LOADS	A	B	
VA	40948	46006	
TOTAL DEMANDED LOADS	**A**	**B**	
VA	40237	45310	
AMPS	335	378	
TOTAL ON		86	KVA
PANEL:		356	AMPS

NOTES:
1. BOLD LINEWEIGHT INDICATES NEW OR REVISED LOAD CIRCUITING. ITALICIZED TEXT INDICATES EXISTING TO REMAIN LOAD CIRCUITING.
(*) PROVIDE NEW CIRCUIT BREAKER, AIC RATING AND MANUFACTURER TO MATCH EXISTING.
2. CIRCUIT 28 ONLY NECESSARY FOR THE APPROVED ADD ALTERNATE.

COMcheck Software Version 4.0.5.1

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: Lone Tree Library
Project Type: Alteration

Construction Site: 8827 Lone Tree Parkway, Lone Tree, CO 80124
Owner/Agent:
Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Common Space Types:Conference/Meeting/Multipurpose: Exempt			
		Total Allowed Watts =	N/A

Area Category Exemption Qualifications

Activity Area	# Fixtures Pre-Alt.	# Fixtures Repl./Added	Total # Watts Pre-Alt.	Total # Watts Post-Alt.
Common Space Types:Conference/Meeting/Multipurpose (1635 sq.ft.)	100	9	4700.000	3900.000

Exemption: Less than 10% fixture replacement.

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Common Space Types:Conference/Meeting/Multipurpose (1635 sq.ft.): Exempt				
			Total Proposed Watts =	N/A

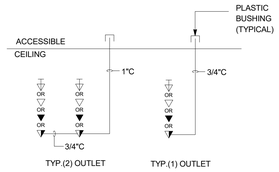
Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.0.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stephanie C Kaltz — Name - Title
Signature
11.23.2016 — Date

Project Title: Lone Tree Library — Report date: 11/11/16
Data filename: C:\Users\skaltz\Documents\COMcheck\348000 Lone Tree Library.cck — Page 1 of 3

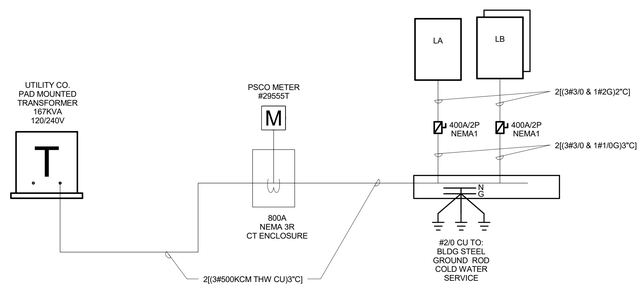


TYPICAL ROUGH-IN FOR CATV,TELE, OR DATA OUTLET LOCATIONS

NOTES:

1. PROVIDE EMT FOR CABLING ROUTED THROUGH AREAS WITH EXPOSED STRUCTURAL CEILINGS AND THROUGH INACCESSIBLE CEILINGS. COORDINATE CONDUIT SIZE REQUIREMENTS WITH CABLE INSTALLER.
2. ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE EXTENT POSSIBLE, AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS, PAINT CONDUIT TO MATCH ADJACENT FINISHES.
3. PROVIDE PULLCORD FOR ALL CONDUIT INSTALLED FOR CABLE.
4. PROVIDE PULLBOXES AS REQUIRED BY CABLE INSTALLER FOR RUNS EXCEEDING MAXIMUM PULL DISTANCE, AS IDENTIFIED BY CABLE INSTALLER.
5. PROVIDE SLEEVES AND CONDUIT BETWEEN FLOORS FOR ROUTING OF CABLE. COORDINATE CONDUIT SIZE WITH CABLE INSTALLER. COORDINATE LOCATION OF RACEWAY WITH ARCHITECT AND CABLE INSTALLER.
6. EACH DEVICE, TELEPHONE, DATA, OR CATV IS TO BE A DOUBLE GANG J-BOX WITH A SINGLE GANG PLASTER RING. WHERE TWO DEVICES ARE INDICATED IMMEDIATELY ADJACENT TO ONE ANOTHER, A SINGLE DOUBLE GANG J-BOX WITH A SINGLE GANG PLASTER RING WILL SUFFICE, UNLESS OTHERWISE NOTED.

1 LOW VOLTAGE DIAGRAM
NO SCALE



3 EXISTING ELECTRICAL ONE LINE DIAGRAM
NO SCALE

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aedesign-inc.com — Project #: 3480.00

LONE TREE LIBRARY REMODEL
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Issue:	FOR REVIEW
Date:	2016-11-11
Drawn By:	SCK
Checked By:	KMD

Revisions:
Description — Date:

Sheet title:
ELECTRICAL ONE LINE DIAGRAM

E600

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CITY OF LONE TREE

LONE TREE LIBRARY REMODEL

8827 Lone Tree Parkway, Lone Tree, CO 80124

100% Construction Documents

Project Manual

November, 23, 2016

STATE OF COLORADO
DAVID S. HAMMEL
B-1468
11/23/16
LICENSED ARCHITECT

BARKER RINKER SEACAT ARCHITECTURE

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CONTRACTING FORMS AND SUPPLEMENTS

PART 1 GENERAL

1.01 AGREEMENT AND CONDITIONS OF THE CONTRACT

A. The Agreement is based on AIA A133.

B. The General Conditions are based on AIA A201.

1.02 FORMS

A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in the Contract Documents.

B. Post-Award Certificates and Other Forms:
1. Submittal Transmittal Form: Contractor's standard form is acceptable.
2. Schedule of Values Form: AIA G703.
3. Application for Payment Form: AIA G702 and G703.

C. Clarification and Modification Forms:
1. Request for Information/Interpretation Form: See Section 00 6000.
2. Substitution Request Form (During Construction): See Section 00 6000.
3. Supplemental Instruction Form: See Section 00 6000.
4. Construction Change Directive Form: See Section 00 6000.
5. Request for Proposal Form: See Section 00 6000.
6. Change Order Form: AIA G701.

D. Closeout Forms:
1. Certificate of Substantial Completion Form: AIA G704.

1.03 REFERENCE STANDARDS

A. AIA A133 - Standard Form of Agreement Between Owner and Construction Manager as Constructor where the basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price.

B. AIA A201 - General Conditions of the Contract for Construction.

C. AIA G701 - Change Order.

D. AIA G702 - Application and Certificate for Payment.

E. AIA G703 - Continuation Sheet.

F. AIA G704 - Certificate of Substantial Completion.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 00 6000

PROJECT FORMS

PART 1 GENERAL

1.01 SUMMARY

A. Procedures for use of administrative forms.

B. Administrative forms.

1.02 PROCEDURES

A. Deliver or electronically transmit completed forms to Architect at the address listed on the cover of the Project Manual.

B. Use of forms included at end of this Section is required. Architect will provide electronic copies of the forms upon request.
   1. Use of Contractor's alternative forms is acceptable subject to approval of Architect, and provided that content of alternative forms is substantially equivalent to forms provided in this Section.

C. Complete applicable information on form. Indicate date transmitted and date of required response, as applicable. Attach supporting documentation and additional descriptive information as necessary to fully describe the request.

D. Use a single form for each separate request. Closely related items may be included in a single request only if acceptance of one item requires acceptance of all items in the request.

E. Comply with the requirements of Section 01 6000 for requests for substitution after execution of the Contract.

1.03 ARCHITECT'S ACTION

A. Architect will review each request, and return the form to Contractor with written response within 7 days of receipt, except when it must be held for coordination with pending submittals, and Contractor is so advised.

B. When requests are made within the time allowed for Architect's review, Architect will make reasonable effort to respond in a timely manner, but no claim for delay by Contractor will be allowed.

C. Substitution Requests: Architect's review is for general conformance with the Contract Documents only and does not relieve Contractor from full compliance with the Contract Documents and Contractor's representations specified in Section 01 6000.

1.04 FORMS

A. Request for Information: Number consecutively; include Architect's project number; clearly specify the document reference by specification Section number, article, paragraph, Drawing number, and detail numbers as applicable. Architect will complete the lower portion of the form as the written response.

B. Substitution Request: Number consecutively; complete all required information on the form; indicate applicable cost savings and time affect, if any. Architect will complete the lower portion of the form as the written response, and will attach further written response as necessary to explain the decision, if required. Forms submitted without all required information as indicated on the form may be returned for completion before review by Architect.

C. Proposal Request: Architect may submit a Proposal Request which includes detailed description of proposed modification with supplementary or revised drawings and specifications, the projected time for executing the modification, with a stipulation of any overtime work required, and the period of time during which the requested price will be considered valid. Refer to Section 01 2000.

D. Supplemental Instructions: Architect may issue a Supplemental Instruction which includes detailed description of proposed minor modification, with supplementary or revised drawings and specifications.

E. Construction Change Directive: Architect may issue a Construction Change Directive, signed by Owner and Architect, instructing Contractor to proceed with a modification to the Work, for subsequent inclusion in a Change Order. Construction Change Directive will describe changes in the Work, and will designate method of determining any change in Contract Sum or Contract Time.

F. Forms are on pages immediately following the end of this Section.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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REQUEST FOR INFORMATION

No.

☐ **Owner** ☐ **Architect** ☐ **Contractor** ☐ **Consultant** ☐ **Field** ☐ **Other:**

Project: **Date:**

Project Number: **Contractor:**

Subject:

This is in response to Contractor RFI form. See form for Contractor request.

Attachments:

Response by:

Signature: ***Date:***

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CA SUBSTITUTION FORM

Project: **Substitution Request Number:**

Date: **Submitting Contractor:**

Reason for Substitution. Check all that apply.

- ☐ **Equal Product – less cost**
- ☐ **Code Compliance**
- ☐ **Better Product – equal or less cost**
- ☐ **Unavailable from Manufacturer**
- ☐ **Project Schedule**
- ☐ **As-built Condition**

Specification Title: **Description:**

Section: **Page:** **Article/Paragraph:**

Describe Advantage to Owner:
Proposed substitution affects other parts of work, including dimensions: ☐ **No** ☐ **Yes; explain**
Effect on drawing(s): ☐ **No** ☐ **Yes; explain**

Product Data Comparison

	Specified	Substitution
Manufacturer		
Product		
Material		
Requirements by Specification Section Number	**(list all specified requirements)**	**(list all comparative data)**
Product History		
Warranty		
Similar Installation		
Cost Implications		
Supporting Data		

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CA SUBSTITUTION FORM

***See Specifications for Substitution Requirements & Responsibilities.**

By filling out this form, the submitting contractor acknowledges the proposed substitution has been fully investigated and is equal or superior in all respects to the specified product.

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PROPOSAL REQUEST

No.

☐ **Owner** ☐ **Architect** ☐ **Contractor** ☐ **Consultant** ☐ **Field** ☐ **Other:**

Project: **Date:**

Contract For: **Project Number:**

Contractor: **Contracted Date:**

Please submit an itemized quotation for changes in the Contract Sum and/or Time incidental to proposed modification to the Contract Documents described herein. THIS IS NOT A CHANGE ORDER NOR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED HEREIN.

Description:

Attachments:

Issued:
Architect: ***Date:***

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ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS

No.

☐ **Owner** ☐ **Architect** ☐ **Contractor** ☐ **Consultant** ☐ **Field** ☐ **Other:**

Project: **Date:**

Project Number: **Contract For:**

Contractor: **Contracted Date:**

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Prior to proceeding in accordance with these instructions, indicate your acceptance of these instructions for minor change to the Work as consistent with the Contract Documents and return a copy the Architect.

Description:

Attachments:

Issued:
Architect: ***Date:***

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CONSTRUCTION CHANGE DIRECTIVE (CCD)

Project: **Project #:**

CCD Date: **CCD #:**

Contractor: **Contract For:**

In order to expedite the work and avoid or minimize delays in the work which may affect the contract sum or contract time, the contract documents are hereby amended as described below. Proceed with this work promptly. Submit final costs for work involved and change in contract time (if any), for inclusion in a subsequent Change order.

Description:

Proposed Adjustments:

1. The proposed basis of adjustment to the Contract Sum of Guaranteed Maximum Price is:

☒ **Lump sum** ☐ **increase** ☐ **decrease of $.**

☐ **Unit Price of $ per .**

☐ **as follows:**

2. The Contract Time is proposed to ☐ **be adjusted** ☐ **remain unchanged. The proposed adjustment, if any, is** ☐ **an increase of days** ☐ **a decrease of days.**

Architect: **Date:**

Owner's Representative: **Date:**

Contractor: **Date:**

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SECTION 01 1000

SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Project Name: Lone Tree Library Remodel.

B. Owner's Name: City of Lone Tree, Colorado.

C. Architect's Name: Barker Rinker Seacat Architecture.

D. The Project consists of the alteration and remodeling of existing Lone Tree Library facility as more completely described in the Contract Documents.

1.02 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on the Cost of the Work plus a fee as described in Document 00 5000 - Contracting Forms and Supplements.

1.03 DIVISION 01 SPECIFICATIONS

A. Division 01 General Requirements expand on the broad provisions of the Conditions of the Contract, and govern the execution of the work of all Sections of the specifications. Division 01 General Requirements specify administrative and procedural requirements relating to execution of the Work, and temporary facilities for use during the construction period.

1.04 PROJECT WARRANTY

A. Refer to General Conditions for warranty provisions applicable to this Contract.
   1. Project warranty period is governed by Colorado state statutes and other provisions of the Contract.

1.05 DESCRIPTION OF ALTERATIONS WORK

A. Scope of building alterations work is shown on Drawings, and general alterations requirements are specified in Section 01 7000.

B. Contractor shall remove and store the following prior to start of Work, for later reinstallation by Contractor:
   1. Existine stone paving material indicated to be removed as part of the Work scope.

1.06 WORK BY OWNER

A. Items noted NIC (Not in Contract) will be supplied and installed by Owner before Substantial Completion. Some items include:
   1. Movable cabinets.
   2. Furnishings.
   3. Small equipment.
   4. Rugs.
   5. Artwork.
   6. Other items noted on Drawings.

1.07 OWNER OCCUPANCY

A. Owner intends to occupy the Project upon Substantial Completion.

1.08 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Drawings.

B. Arrange use of site and premises to allow:
   1. Owner occupancy.
   2. Work by Others.
   3. Work by Owner.

C. Provide access to and from site as required by law and by Owner:
   1. Do not obstruct roadways, sidewalks, cartpaths, pedestrian walkways, and other public ways to maintain full operation of golf course at all times.

D. Existing building spaces may not be used for storage.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2000

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

B. Documentation of modifications in Contract Sum and Contract Time.

C. Modification procedures.

D. Correlation of Contractor submittals based on modifications.

E. Procedures for preparation and submittal of application for final payment.

1.02 RELATED REQUIREMENTS

A. Section 00 5000 - Contracting Forms and Supplements: Forms to be used.

1.03 SCHEDULE OF VALUES

A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.

B. Forms filled out by hand will not be accepted.

C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.

D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization.

E. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
   1. Forms filled out by hand will not be accepted.

C. For each item, provide a column for listing each of the following:
   1. Item Number.
   2. Description of work.
   3. Scheduled Values.
   4. Previous Applications.
   5. Work in Place and Stored Materials under this Application.
   6. Authorized Change Orders.
   7. Total Completed and Stored to Date of Application.
   8. Percentage of Completion.
   9. Balance to Finish.
   10. Retainage.

D. Execute certification by signature of authorized officer.

E. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.

F. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.

G. Submit three copies of each Application for Payment.

H. Include the following with the application:
   1. Transmittal letter as specified for Submittals in Section 01 3000.
   2. Construction progress schedule, revised and current as specified in Section 01 3000.
   3. Conditional release of liens from each Subcontractor and vendor for the current month's payment application, and unconditional release of liens from each Subcontractor and vendor for the previous month's payment application.
   4. Project record documents as specified in Section 01 7800, for review by Owner which will be returned to the Contractor.
   5. Affidavits attesting to off-site stored products.

I. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 MODIFICATION PROCEDURES

A. Project Modification Forms: Forms for use primarily by Contractor are provided in Section 00 6000.

B. Establish and maintain a construction cost log, including the status of all pending and executed Change Orders (accepted, declined, pending, etc.), status of requests for information, supplemental instructions, other modification documents, and the status of allowances, including Owner's contingency allowance.

C. Requests for Information: Use for requesting supplemental information or an interpretation of the Contract Documents. Contractor is required to research the Contract documents thoroughly, and only request information or an interpretation for an item that is not clearly indicated in, or reasonably inferrable from, the Contract Documents.
   1. Provide a clear and concise statement of the item for which information or an interpretation is requested; include legibly prepared supplemental drawings or sketches as necessary to support the request. Also provide one or more recommendations for a response, based on the perceived intent of the Contract Documents.
   2. Architect reserves the right to not provide a response if the response is otherwise clearly included in, or reasonably inferrable from, the Contract Documents.
   3. Allow minimum 7 calendar days for Architect to provide a response to requests for information.
   4. If Contractor fails to submit a request for information in a timely manner, Contractor will not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required by Architect for review of request for information.
   5. Architect's response to a request for information does not constitute a modification of the Contract Documents. If Architect's response requires a modification of the Contract Documents, prepare a request for change order or other modification according to applicable modification procedures specified in this Section.

D. Supplemental Instructions: For minor modifications not involving an adjustment to the Contract Sum or Contract Time; Architect will issue instructions directly to Contractor.
   1. Architect's issuance of supplemental instructions may constitute a modification of the Contract Documents involving an adjustment to the Contract Sum or Contract Time. If Architect's supplemental instructions require such a modification of the Contract Documents, prepare a request for change order or other modification according to applicable modification procedures specified in this Section.

E. Construction Change Directive: For other required modifications, Architect will issue a document signed by Architect and Owner instructing Contractor to proceed with the modification, for subsequent inclusion in a Change Order.
   1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
   2. Promptly execute the change.

F. Proposal Request: For modifications for which advance pricing is desired, Architect will issue a document which includes a detailed description of a proposed modification with supplementary or revised drawings and specifications, a modification in Contract Time for executing the modification with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 10 days.

G. Contractor may propose a change by submitting a request for change order or modification to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors.
   1. Document any requested substitutions in accordance with Section 01 6000.

H. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
   1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
   2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
   3. For pre-determined unit prices and quantities, the amount will based on the fixed unit prices.
   4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.

I. Substantiation of Costs: Provide full information required for evaluation.
   1. Provide the following data:
      a. Quantities of products, labor, and equipment.
      b. Taxes, insurance, and bonds.
      c. Overhead and profit.
      d. Justification for any change in Contract Time.
      e. Credit for deletions from Contract, similarly documented.
   2. Support each claim for additional costs with additional information:
      a. Origin and date of claim.
      b. Dates and times work was performed, and by whom.
      c. Time records and wage rates paid.
      d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
   3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.

J. Execution of Change Orders: Contractor will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

K. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

L. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

M. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:
   1. All closeout procedures specified in Section 01 7000.
   2. Receipt of final Certificate of Occupancy from jurisdictional authority.
   3. Acceptance of Work by Owner and Architect.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2300

ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Description of Alternates.

B. Procedures for pricing Alternates.

C. Documentation of changes to Contract Sum and Contract Time.

1.02 GENERAL ALTERNATE REQUIREMENTS

A. The description of each Alternate is recognized to be incomplete and abbreviated, but requires that each change must be complete for the scope or work affected. Refer to applicable specification Sections and applicable Drawings for the specific requirements of work.

1.03 DESCRIPTION OF ALTERNATE REQUIREMENTS

A. Alternates are defined as alternative products, materials, equipment, systems, methods, units of work, or major elements of construction which may, at Owner's option, be selected for the work in place of corresponding requirements of the Contract Documents. Selection may occur prior to the Contract date, or may be deferred for possible selection at a subsequent date.

B. Include as part of each Alternate, miscellaneous devices, appurtenances, differences in utility or power requirements, and similar items incidental to or required for complete and functioning installation, whether or not specifically mentioned as part of the alternate description.

C. Immediately following award of the Contract, prepare and distribute to each entity involved, notification of the status of each Alternate. Indicate whether alternates have been accepted, rejected, or deferred for consideration at a later date. Indicate a complete description of negotiated modifications to described scope of Alternates, if any.

1.04 ACCEPTANCE OF ALTERNATES

A. Alternates will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.

B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

1.05 SCHEDULE OF ALTERNATES

A. Alternates: See Drawings.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 3000

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preconstruction meeting.

B. Progress meetings.

C. Construction progress schedule.

D. Submittals for review, information, and project closeout.

E. Number of copies of submittals.

F. Submittal procedures.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Construction Progress Schedule: Submit construction progress schedule according to the requirements specified in this Section.

C. Submittal Schedule: Submit submittal schedule according to the requirements specified in this Section.

D. Submittals: As specified in individual specification Sections.

1.03 PROJECT COORDINATION - GENERAL

A. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for site access, traffic, and parking facilities.

B. During construction, coordinate use of site and facilities through the Project Coordinator.

C. Comply with Project Coordinator's procedures for communications within the construction team; for submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.

D. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.

E. Coordinate field engineering and layout work under instructions of the Project Coordinator.

F. Make the following types of submittals to Architect through the Project Coordinator:
   1. Requests for interpretation.
   2. Requests for substitution.
   3. Shop drawings, product data, and samples.
   4. Test and inspection reports.
   5. Manufacturer's instructions and field reports.
   6. Applications for payment and change order requests.
   7. Progress schedules.
   8. Coordination drawings.
   9. Correction Punch List and Final Correction Punch List for Substantial Completion.
   10. Closeout submittals.
   11. Other specified submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

A. Architect will schedule a meeting after Notice of Award.

B. Attendance Required:
   1. Owner.
   2. Architect.
   3. Contractor.
   4. Other invited participants.

C. Minimum Agenda:
   1. Execution of Owner-Contractor Agreement.
   2. Submission of executed bonds and insurance certificates.
   3. Distribution of Contract Documents.
   4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
   5. Designation of personnel representing the parties to Contract, including Contractor, Owner, and Architect.
   6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
   7. Scheduling.
   8. Scheduling activities of a Geotechnical Engineer.

D. Record minutes and distribute electronically within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

A. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

B. Attendance Required:
   1. Contractor.
   2. Owner.
   3. Architect.
   4. Contractor's Superintendent.
   5. Major Subcontractors.

C. Minimum Agenda:
   1. Review minutes of previous meetings.
   2. Review of Work progress.
   3. Field observations, problems, and decisions.
   4. Review of RFI log and status of RFI's.
   5. Identification of problems that impede, or will impede, planned progress.
   6. Review of submittals schedule and status of submittals.
   7. Modification (Change Order) status.
   8. Review of off-site fabrication and delivery schedules.
   9. Maintenance of progress schedule.
   10. Corrective measures to regain projected schedules.
   11. Planned progress during succeeding work period.
   12. Coordination of projected progress.
   13. Maintenance of quality and work standards.
   14. Effect of proposed changes on progress schedule and coordination.
   15. Other business relating to Work.

D. Record minutes and distribute electronically within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE

A. Within 10 days after date established in Notice to Proceed, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
   1. Include written certification that major Subcontractors have reviewed and accepted proposed schedule.

D. Within 10 days after joint review, submit complete schedule.

E. Submit updated schedule with each Application for Payment.

3.04 SUBMITTALS FOR REVIEW

A. When the following are specified in individual Sections, submit them for review:
   1. Product data.
   2. Shop drawings.
   3. Samples for selection.
   4. Samples for verification.

B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C. Samples will be reviewed only for aesthetic, color, or finish selection as applicable.

D. Coordinate submittals into logical groupings to facilitate interrelation of the several items:
   1. Submit complete package of specified submittals for each product or system, generally associated with an individual specification Section. Partial submittals will not be reviewed, and no delay claim will be considered as the result of a partial submittal being returned for proper resubmittal.
   2. Submit all structural steel framing shop drawings, product data, schedules, and other specified submittal information in a single package as specified in Division 05.
   3. Submit all door, frame, and hardware product data, schedules, and other specified submittal information in a single package as specified in Division 08.

E. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES articles below, and for record documents purposes described in Section 01 7800.

3.05 SUBMITTALS FOR INFORMATION

A. When the following are specified in individual Sections, submit them for information:
   1. Design data.
   2. Certificates.
   3. Test reports.
   4. Inspection reports.
   5. Manufacturer's instructions.
   6. Manufacturer's field reports.
   7. Other types specified.

B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

A. Submit Correction Punch List for Substantial Completion.

B. Submit Final Correction Punch List for Substantial Completion.

C. When the following are specified in individual Sections, submit them at project closeout:
   1. Project record documents.
   2. Operation and maintenance data.
   3. Warranties.
   4. Bonds.
   5. Other types specified.

D. Submit for Owner's benefit during and after project completion.

3.07 NUMBER OF COPIES OF SUBMITTALS

A. Electronic Documents - Submittals for Review and Information: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

B. Electronic Submittals for Review: Submit each individual submittal as a single electronic file.
   1. File Format: Portable document format (PDF); file must be able to accept electronically added commentary by reviewers and the insertion of the Architect's review stamp without allowing alteration of the base submittal document.

2. Sheet Size: Formatted to print full size with all pages of the submittal on same size sheet; when printed, each sheet must be scaleable to the indicated drawing scale, if applicable.
3. Include as the first page of the submittal file, an electronic image of the specified submittal transmittal form.
4. Include Contractor's review stamp conspicuously located on the submittal indicating status of review and approval, as specified for hard copy submittals.
5. Comply with specified general submittal procedures.

C. Submittals for Information: Submit one copy.

D. Samples: Submit the number specified in individual specification Sections; one of which will be retained by Architect.
1. After review, produce duplicates.
2. Retained samples will not be returned to Contractor unless specifically so stated.

3.08 DIGITAL DRAWING FILES

A. Architect's Digital Files: Upon request by Contractor, a digital copy of Project Building Information Model (BIM) or CADD Drawing files will be provided as a courtesy for Contractor's limited use. Such information is not considered to be a part of the Contract Documents.
1. Use of this information is at Contractor's sole risk.
2. Report to Architect discrepancies, if any, between published Contract Documents and information provided according to General Conditions and other administrative requirements of the Contract.
3. Prior to receiving digital files, execute data licensing agreement; Architect's standard form.
4. Architect is not responsible for updating or maintaining currency of digital drawing files after initially provided to Contractor.
5. Submittals prepared using any of these files as the primary submittal content without the inclusion of substantial additional content generated by Contractor according to specified requirements for applicable submittals will not be accepted or reviewed by Architect.

3.09 SUBMITTAL PROCEDURES - GENERAL

A. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.
2. Do not reproduce the Contract Documents to create shop drawings.
3. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.

B. Transmit each submittal with a copy of approved submittal form.
1. Submittal Format: Electronic only.
2. Sample Submittals: Submit as physical submittals as specified.
3. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

C. Submittal Schedule: Establish and maintain a submittal schedule, numbering each submittal by corresponding CSI Section number using Architect's project number as a prefix.
1. Provide initial schedule at first progress meeting, and provide updated and current schedule at each progress meeting.
2. Include in schedule anticipated dates for each submittal to Architect, required dates of return of reviewed submittal to Contractor, and any required lead times associated with applicable submittals.
3. Coordinate submittal schedule with Contractor’s construction progress schedule.
4. Schedule submittals to expedite the Project, and coordinate submission of related items.
5. For each submittal for review, allow minimum 15 calendar days for review, excluding delivery time from and back to Contractor.
6. If Contractor fails to submit a submittal schedule, Contractor will not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.
7. Number multiple submittals within each Section sequentially as a suffix, starting with 001.

D. Special Submittal Restrictions:
1. Submittals not requested will not be recognized or processed.
2. Submittals not reviewed by Contractor will be rejected, and will not be reviewed by Architect. Claims for delay as the result of submittals not reviewed by Contractor will not be allowed.

E. Submittal Identification: Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification Section number, as appropriate on each copy.

F. Submittal Review Stamps:
   1. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
   2. Provide space for Contractor and Architect review stamps.
   3. Submittals not bearing Contractor's review stamp, indicating both review and approval, will not be reviewed and be returned for required review.

G. Sample and Non-electronic Submittals: Deliver sample and non-electronic submittals to Architect at business address.

H. Manufacturer's Catalog Submittals: If manufacturer's published catalog information is used as part of a submittal, include only those pages from catalog that are specifically applicable to the proposed products for this Project.
   1. Clearly identify in the submittal those specific products and components for which review and action is requested.
   2. Submittals received that do not clearly identify specific applicable products, or that include more pages than those specifically applicable to the subject submittal, will be returned as "not reviewed" and the time for submittal review will not commence until a properly scoped submittal is received by Architect.

I. Resubmittals:
   1. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
   2. When revised for resubmission, identify all changes made since previous submission.
   3. Make resubmissions under procedures specified for initial submittals.

J. Submittal Distribution: Distribute reviewed and approved submittals to all affected parties. Instruct parties to promptly report any inability to comply with indicated requirements.

3.10 ARCHITECT'S ACTION

A. Architect will review each submittal, mark it with appropriate "action," and return it to Contractor within specified time allowance; except when it must be held for coordination, and Contractor is so advised.

B. Where submittals include materials, products, systems, or manufacturers not specified, approved by Addendum prior to execution of the Contract, or approved in writing in conjunction with the proposed products list submittal specified in Section 01 6000, Architect reserves the right to exceed the specified time allowance to allow sufficient time to determine the acceptability of such items, and no claim for delay by Contractor will be allowed.

C. Where submittals include a material, product, system, or manufacturer substitution which has not been previously accepted or approved in writing, Architect reserves the right to reject such submittal and require a compliant submittal, or may direct that other action be taken by Contractor to achieve compliance with Contract Documents, and no claim for delay by Contractor will be allowed.

D. Architect's review is for general conformance only and does not relieve Contractor from full compliance with the Contract Documents. Refer to General Conditions.

END OF SECTION

SECTION 01 4000

QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Submittals.

B. Quality assurance.

C. References and standards.

D. Control of installation.

E. Mock-ups.

F. Tolerances.

G. Defect Assessment.

H. Basis of design specifications.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Certificates: When specified in individual specification Sections, submit certification by the manufacturer and Architect or installation/application subcontractor to Architect, in quantities specified for Product Data.
   1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
   2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

C. Subcontractor, Trade Contractor and Installer Qualifications: When specified in individual specification Sections, submit qualifications data substantiating specified qualifications; three copies, one of which will be reviewed and returned to Contractor indicating action taken.

D. Manufacturer's Instructions: When specified in individual specification Sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

E. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
   1. Submit report in duplicate within 30 days of observation to Architect for information.
   2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.

1.03 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date or edition is established by applicable code.

C. Obtain copies of standards where required by product specification Sections.
   1. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

D. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

E. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference standard document.

1.04 QUALITY CONTROL - GENERAL

A. Maintain quality control over subcontractors, suppliers, manufacturers, products, services, site conditions, and workmanship to produce Work of specified quality according to the requirements of the Contract Documents.

1.05 BASIS OF DESIGN SPECIFICATIONS

A. Individual specification Sections may include a Basis of Design Manufacturer or Product, which forms the basis of the specifications, Drawing details, and other requirements of the Contract Documents. The specified Basis of Design Manufacturer or Product is not intended to exclude other manufacturers, products, or systems which comply with the requirements of the Contract Documents, subject to the provisions and requirements specified in individual specification Sections.

B. Comply with the administrative requirements for substitutions specified in Section 01 6000 for proposed products or systems other than the specified Basis of Design Manufacturer or Product.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.
   1. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

C. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

D. Have Work performed by persons qualified to produce required and specified quality.

E. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

F. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.

B. Accepted mock-ups establish the standard of quality the Architect will use to judge the Work.

C. Integrated Exterior Mock-ups: Construct integrated exterior mock-up as indicated on Drawings. Coordinate installation of exterior envelope materials and products as required in individual Specification Sections. Provide adequate supporting structure for mock-up materials as necessary.

D. Provide supervisory personnel who will oversee mock-up construction. Provide workers that will be employed during the construction at Project.

E. Tests will be performed under provisions identified in this Section and identified in the respective product specification Sections.

F. Assemble and erect specified items with specified backing materials, attachment and anchorage devices, weather barriers, flashings, sealants, applied coatings, surface treatments, and finishes.

G. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.
   1. Architect will issue written comments within seven (7) working days of initial review and each subsequent follow up review of each mock-up.
   2. Make corrections as necessary until Architect's approval is issued.

H. Accepted mock-ups shall be a comparison standard for the remaining Work.

I. Where mock-up has been accepted by Architect and is specified in product specification Sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

3.03 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment, with Owner's consent.

END OF SECTION

SECTION 01 4100

REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Obtain and pay for required permits, fees, licenses, and inspections.

B. Arrange for required regulatory inspections and approvals.

C. Verify applicable codes and regulations.

D. Comply with applicable codes and regulations.
   1. Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities.
   2. Contractor is required to promptly report to Architect any nonconformity discovered by or made known to Contractor as a request for information as specified, or in such form as Architect may otherwise require.

E. Listing of applicable Codes and regulations in this Section is not to be considered complete and all-inclusive; listing refers to primary applicable Codes and regulations only.

1.02 QUALITY ASSURANCE

A. Become completely familiar with applicable requirements of codes and regulations.

B. Verify that substituted materials and equipment used in the Work meet or exceed applicable code requirements.

C. Designer Qualifications: Where delegated engineering design (design-build work) is to be performed under the construction contract, provide the direct supervision of a Professional Engineer experienced in design of this type of work; licensed in Colorado.

1.03 APPLICABLE CODES AND REGULATIONS

A. Federal Regulations (Including but not limited to):
   1. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

B. City of Centennial, State of Colorado Regulations, and other regulations (including but not limited to):
   1. Zoning Code: Local jurisdiction.
   2. Fire Protection District: Local jurisdiction.
   3. Tri-County Health Department standards and regulations, as applicable.
   4. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; edition cited in applicable building code.
   5. ICC (IFC) - ICC International Fire Code, 2015.
   6. ICC (IBC) - ICC International Building Code, 2015.
   7. ICC (IPC) - ICC International Plumbing Code, 2015.
   8. ICC (IMC) - ICC International Mechanical Code, 2015.
   9. ICC (IFGC) - ICC International Fuel Gas Code, 2015.
   10. ICC (IECC) - ICC International Energy Conservation Code, 2015.
   11. NFPA 70 - National Electrical Code; 2014.
   12. Erosion and Sedimentation Control Regulations: Local jurisdiction.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 5000

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary telecommunications services.

B. Temporary sanitary facilities.

C. Temporary Controls: Barriers, enclosures, and fencing.

D. Security requirements.

E. Waste removal facilities and services.

F. Project identification sign.

1.02 TELECOMMUNICATIONS SERVICES

A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.

1.03 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Maintain daily in clean and sanitary condition.

1.04 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers, and to protect existing facilities and adjacent properties from damage from construction operations.

B. Provide protection for plants designated to remain. Replace damaged plants.

C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.05 WASTE REMOVAL

A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

B. Provide containers with lids. Remove trash from site periodically.

C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.06 PROJECT IDENTIFICATION

A. Provide project identification sign of design, construction, and location approved by Owner.

B. No other signs are allowed without Owner permission except those required by law.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 6000

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General product requirements.

B. Transportation, handling, storage and protection.

C. Product option requirements.

D. Substitution limitations and procedures.

E. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
   1. Submit within 15 days after date of Notice to Proceed.
   2. For products specified only by reference standards, list applicable reference standards.

C. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

D. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

E. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

B. DO NOT USE products having any of the following characteristics:
   1. Made using or containing CFC's or HCFC's.
   2. Containing lead, cadmium, asbestos.

C. Where all other criteria are met, give preference to products that:
   1. Are extracted, harvested, and/or manufactured closer to the location of the project.
   2. Have longer documented life span under normal use.
   3. Result in less construction waste.

2.02 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

D. Products Specified by Naming a Basis of Design Manufacturer or Product with a Provision for Substitutions: Submit a request for substitution for any other manufacturer listed under Other Acceptable Manufacturers, or for a manufacturer not named.
   1. Refer to Section 01 4000 for basis of design specifications requirements.

2.03 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification Sections.

B. Deliver and place in location as directed; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

A. Architect may consider requests for substitutions when one or more of the following conditions exist, as determined by Architect. If one or more of the following conditions are determined not to exist, Architect may not consider request further, and may take no action except to record the request and its non-compliance. Consideration may be made if substitution request:
   1. Offers Owner substantial advantage in cost, time, energy conservation, or other consideration, after deducting additional responsibilities Owner must assume as the result.
   2. Does not require extensive modification of Contract Documents.
   3. Is consistent with intent of Contract Documents, and will produce intended work results.
   4. Is fully documented and properly submitted.
   5. Will not adversely affect Contractor's construction schedule.
   6. Resolves specified Product being unable to receive required approval by Authority Having Jurisdiction (AHJ), and substitution has received such approval prior to submission.
   7. Resolves incompatibility of specified Product with other related Products, and substitution is compatible with related Products.
   8. Resolves non-coordination of specified Product with other related Products, and substitution is coordinated with related Products.
   9. Provides specified warranty when specified Product cannot be provided with specified warranty.
   10. Will be considered when a Product becomes unavailable through no fault of the Contractor.
   11. Will be considered if a Product cannot be provided within the Contract Time; Architect will not consider substitution if Product cannot be provided as the result of Contractor's failure to schedule and coordinate the Work as required by Contract Documents.
   12. Has been coordinated with and among all affected Subcontractors and other portions of the Work, and is acceptable to all affected Subcontractors.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
   1. Request for Substitution Form: Specified in Section 00 6000.

C. A request for substitution constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
   2. Agrees to provide the same warranty for the substitution as for the specified product.
   3. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.

D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

3.02 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

H. Comply with manufacturer's warranty conditions, if any.

I. Do not store products directly on the ground.

J. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

K. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

L. Prevent contact with material that may cause corrosion, discoloration, or staining.

M. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

N. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 7000

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.

C. Pre-installation meetings.

D. Cutting and patching.

E. Surveying for laying out the work.

F. Cleaning and protection.

G. Demonstration and instruction of Owner personnel.

H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

I. General requirements for maintenance service.

1.02 DEFINITIONS

A. Verify, Field Verify, or Drawing Abbreviation: Use on Drawings or in specifications is intended to alert Contractor that indicated measurement or description of work may not be fully determined without comparing verified dimension in larger context or other dependent measurements due to specific product, actual versus nominal dimensions, or measurements of existing conditions.
   1. Notify Architect of descrepancies between dimensions shown and field layout or measurements.

1.03 REFERENCE STANDARDS

A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
   1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences. Include design drawings and calculations for bracing and shoring.
   2. Identify demolition firm and submit qualifications.
   3. Include a summary of safety procedures.

C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
   1. Structural integrity of any element of Project.
   2. Integrity of weather exposed or moisture resistant element.
   3. Efficiency, maintenance, or safety of any operational element.
   4. Visual qualities of sight exposed elements.
   5. Work of Owner or separate Contractor.
   6. Include in Request:
      a. Identification of Project.
      b. Location and description of affected work.
      c. Necessity for cutting or alteration.
      d. Description of proposed work and products to be used.
      e. Alternatives to cutting and patching.
      f. Effect on work of Owner or separate Contractor, if applicable.
      g. Written permission of affected separate Contractor, if applicable.
      h. Date and time work will be executed.

D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.05 QUALIFICATIONS

A. For demolition work, employ a firm specializing in the type of work required.
   1. Minimum of five years of documented experience.

B. For survey work, employ a land surveyor registered in Colorado and acceptable to Architect. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

C. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in Colorado.

D. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in Colorado.

1.06 PROJECT CONDITIONS

A. Use of explosives is not permitted without written permission from Owner.

B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

E. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
   1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
   2. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.

F. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
   1. Minimize amount of bare soil exposed at one time.
   2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
   3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
   4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

H. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

I. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.07 COORDINATION

A. Coordinate scheduling, submittals, and work of the various Sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Notify affected utility companies and comply with their requirements.

C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

F. Coordinate completion and clean-up of work of separate Sections.

G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product Sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification Sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PRE-INSTALLATION MEETINGS

A. When required in individual specification Sections, convene a pre-installation meeting at the site prior to commencing work of the Section.

B. Require attendance of parties directly affecting, or affected by, work of the specific Section.

C. Notify Architect minimum 7 calendar days in advance of proposed meeting date.

D. Prepare agenda and preside at meeting:
   1. Review conditions of examination, preparation and installation procedures.
   2. Review coordination with related work.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work.

B. Promptly notify Architect of any discrepancies discovered.

C. Locate and protect survey control and reference points.

D. Control datum for survey is that indicated on Drawings.

E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

F. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

G. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.

H. Utilize recognized engineering survey practices.

I. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.

J. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
   1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
   2. Grid or axis for structures.
   3. Building foundation, column locations, ground floor elevations.

K. Periodically verify layouts by same means.

L. Maintain a complete and accurate log of control and survey work as it progresses.

3.05 GENERAL INSTALLATION REQUIREMENTS

A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.

B. Install products as specified in individual Sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

F. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as shown.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of alterations work constitutes acceptance of existing conditions.

B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
   1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000.

C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
   1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
   2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.

D. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

E. Remove existing work as indicated and as required to accomplish new work.
   1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
   2. Remove items indicated on Drawings.
   3. Relocate items indicated on Drawings.
   4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
   5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

F. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
   2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
   3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
      a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
      b. Provide temporary connections as required to maintain existing systems in service.
   4. Verify that abandoned services serve only abandoned facilities.
   5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.

G. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.

H. Adapt existing work to fit new work. Make as neat and smooth transition as possible.
   1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
   2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
   3. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
   4. Trim existing wood doors as necessary to clear new floor finish. Refinish trim as required.

I. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.

J. Refinish existing surfaces as indicated:
   1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
   2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.

K. Clean existing systems and equipment.

L. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

M. Do not begin new construction in alterations areas before demolition is complete.

N. Comply with all other applicable requirements of this Section.

3.07 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. See Alterations article above for additional requirements.

C. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-conforming work.

D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

F. Cut rigid materials, resulting in clean and neat edges, using masonry saw or core drill. Cutting rigid materials using chisels, impact or pneumatic tools is not allowed without prior approval.

G. Restore work with new products in accordance with requirements of Contract Documents.

H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.

J. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.08 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from wall cavities, pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site weekly and dispose off-site; do not burn or bury.

3.09 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification Sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
   1. Keep waterproofed and roofed surfaces clean and free of debris that could cause damage to surfaces and membranes, particularly sharp objects including fasteners, wire cut-offs, and similar items.

G. Prohibit traffic from landscaped areas.

H. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

I. Failure to protect installed and existing work may result in withholding of payments to Contractor as determined by Architect. Damage resulting from failure to protect installed and existing work must be fully repaired or replaced as applicable to the satisfaction of Architect at no additional cost to Owner.

3.10 DEMONSTRATION AND INSTRUCTION

A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.

B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.

E. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. The amount of time required for instruction on each item of equipment and system is that specified in individual Sections.

3.11 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

B. Testing, Adjusting, and Balancing HVAC Systems: See Division 23 and Section 01 4000.

3.12 FINAL CLEANING

A. Execute final cleaning after Substantial Completion but before making final application for payment.

B. Use cleaning materials that are nonhazardous.

C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

F. Clean filters of operating equipment.

G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.

H. Clean site; sweep paved areas, rake clean landscaped surfaces.

I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.13 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.
   1. Provide copies to Architect and Owner.

B. Accompany Owner and Architect on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.

C. Notify Architect in writing when work is considered ready for Architect's Substantial Completion inspection.
   1. Prerequisite for Substantial Completion: In addition to definition of Substantial Completion in the General Conditions or Agreement, Substantial Completion is not considered achieved until Certificate of Occupancy is issued by primary jurisdictional authority, allowing Owner to fully occupy or utilize building and associated facilities for intended use in all respects.

D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.

E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

G. Accompany Owner and Architect on Contractor's preliminary final inspection.

H. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.

I. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

3.14 MAINTENANCE

A. Provide service and maintenance of components indicated in specification Sections.

B. Maintenance Period: As indicated in specification Sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of Owner.

END OF SECTION

SECTION 01 7800

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project record documents.

B. Operation and maintenance data.

C. Warranties and bonds.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.

C. Operation and Maintenance Data:
1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
4. Submit two sets of revised final documents in final form within 10 days after final inspection.

D. Warranties and Bonds:
1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.
5. Reviewed shop drawings, product data, and samples.
6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product Section description of actual products installed, including the following:
1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and modifications.

F. Record Drawingsand Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to finish main floor datum.
   2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original Contract Drawings.

3.02 OPERATION AND MAINTENANCE DATA

A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. For Each Product, Applied Material, and Finish:
   1. Product data, with catalog number, size, composition, and color and texture designations.
   2. Information for re-ordering custom manufactured products, if any.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture Protection and Weather-exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional information as specified in individual product specification Sections.

E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. For Each Item of Equipment and Each System:
   1. Description of unit or system, and component parts.
   2. Identify function, normal operating characteristics, and limiting conditions.
   3. Include performance curves, with engineering data and tests.
   4. Complete nomenclature and model number of replaceable parts.

B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

D. Include manufacturer- or installer-produced wiring diagrams representing installed conditions.

E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

G. Provide servicing and lubrication schedule, and list of lubricants required.

H. Include manufacturer's printed operation and maintenance instructions.

I. Include sequence of operation by controls manufacturer.

J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

K. Provide control diagrams by controls manufacturer representing installed conditions.

L. Provide Contractor's coordination drawings, with color coded piping diagrams documenting installed conditions.

M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

O. Include test and balancing reports.

P. Additional Requirements: As specified in individual product specification Sections.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

A. Assemble operation and maintenance data into electronic files for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification Sections.
   1. Where systems involve more than one specification Section, provide separate electronic bookmarked tab for each system.

B. Electronic Cover Page: Identify each file with first page titled OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

C. Table of Contents: Arrange content by systems under Section numbers and sequence of Table of Contents of this Project Manual.

D. Project Directory: Provide title of Project; names, addresses, and telephone numbers of Architect, Consultants, and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

E. Electronic Bookmarking: Provide electronically bookmarked divider pages in each file for each separate product and system; identify the contents on the divider page; immediately following the divider page include a description of product and major component parts of equipment.

F. Arrangement of Contents: Organize each volume in parts as follows:
   1. Project Directory.
   2. Table of Contents, of all volumes, and of this volume.
   3. Operation and Maintenance Data: Arranged by system, then by product category.
      a. Source data.
      b. Product data, shop drawings, and other submittals.
      c. Operation and maintenance data.
      d. Field quality control data.
      e. Electronic scans warranties and bonds.
   4. Design Data: To allow for addition of design data furnished by Architect or others, provide a bookmarked divider page labeled "Design Data" and allow for insertion of additional electronic data, if applicable.

3.06 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
   1. Warranties must clearly state that warranty commences on Date of Substantial Completion, and the actual Date of Substantial Completion according to the Contract must be clearly stated on the warranty form.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

E. Include photocopies of each in operation and maintenance manuals, indexed separately on Table of Contents.

F. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification Section in which specified, and the name of product or work item.

END OF SECTION

SECTION 05 5000

METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Shop fabricated steel items.

1.02 REFERENCE STANDARDS

A. ASTM A992/A992M - Standard Specification for Structural Steel Shapes.

B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.

C. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

D. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.

E. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

F. ASTM C230/C230M - Flow Table for Use in Tests of Hydraulic Cement.

G. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).

H. AWS D1.1/D1.1M - Structural Welding Code - Steel.

I. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer.

J. SSPC-SP 2 - Hand Tool Cleaning.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
   1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel W Shapes: ASTM A992/A992M.

C. Steel Tubing: ASTM A500/A500M, Grade B cold-formed.

D. Plates: ASTM A283.

E. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.

F. Fasteners: As detailed or required for indicated applications.

G. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

H. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

A. Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Continuously seal joined members by continuous welds.

D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

A. Provide and install items shown on Drawings with anchorage and attachments necessary for installation.

2.04 ACCESSORIES

A. Non-Shrink Grout: ASTM C1107/C1107M, Grade B; pre-mixed compound consisting of non-metallic aggregate, cement, and manufacturer's specified water reducing and plasticizing agents; non-staining, non-gas-forming, containing no chlorides; plastic consistency as measured according to ASTM C230/C230M; capable of developing minimum compressive strength of 10,000 psi in 28 days.

2.05 FINISHES - STEEL

A. General:
   1. Prepare surfaces to be primed in accordance with SSPC-SP2, or as recommended by finish coating manufacturer.
   2. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

B. Prime paint all steel items, unless otherwise specified.
   1. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing.
   2. Prime Painting: One coat.

2.06 FABRICATION TOLERANCES

A. Squareness: 1/8 inch maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch.

C. Maximum Misalignment of Adjacent Members: 1/16 inch.

D. Maximum Bow: 1/8 inch in 48 inches.

E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components indicated on Drawings.

D. Perform field welding in accordance with AWS D1.1/D1.1M.

E. Obtain approval prior to site cutting or making adjustments not scheduled.

F. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.

3.04 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch.

C. Maximum Out-of-Position: 1/4 inch.

END OF SECTION

SECTION 06 1000

ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concealed wood blocking, nailers, and supports.

B. Miscellaneous wood nailers, furring, and grounds.

1.02 REFERENCE STANDARDS

A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

B. PS 1 - Structural Plywood.

C. PS 20 - American Softwood Lumber Standard.

D. WWPA G-5 - Western Lumber Grading Rules.

1.03 ADMINSTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate installation of rough carpentry members specified in other Sections.

1.04 DELIVERY, STORAGE, AND HANDLING

A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
   1. Species: Douglas Fir-Larch or Hem-Fir, unless otherwise indicated.
   2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. Grading Agency: Western Wood Products Association (WWPA).

B. Sizes: Nominal sizes as indicated on Drawings, S4S.

C. Moisture Content: S-dry or MC19.

D. Wood Blocking, Nailers, Grounds, and Furring:
   1. Lumber: S4S, No. 2 or Standard Grade.
   2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

A. Blocking Applications:
   1. Plywood Blocking/Nailers - Concealed From View But Located Within Exterior Enclosure: PS 1, C-C Plugged or better, Exterior grade.
   2. Plywood Blocking/Nailers - Other Locations: PS 1, C-D Plugged or better.

2.04 ACCESSORIES

A. Fasteners and Anchors:
   1. Metal and Finish: Hot-dipped galvanized steel per ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

A. Select material sizes to minimize waste.

B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including shims, bracing, and blocking.

3.02 BLOCKING, NAILERS, AND SUPPORTS

A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.

C. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.

D. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

E. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

3.03 CLEANING

A. Waste Disposal:
   1. Comply with applicable regulations.
   2. Do not burn scrap on project site.
   3. Do not burn scraps that have been pressure treated.
   4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or “waste-to-energy” facilities.

B. Do not leave any wood, shavings, sawdust, or similar waste on the ground or buried in fill.

C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

SECTION 06 2000

FINISH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Finish carpentry items.

B. Wood casings and moldings.

1.02 REFERENCE STANDARDS

A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards.

C. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce).

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
   1. Minimum Scale of Detail Drawings: 1-1/2 inch to 1 foot.
   2. Provide the information required by AWI/AWMAC/WI (AWS).

C. Samples: Submit two samples of wood trim 12 inch long.

1.04 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in fabricating the products specified in this Section with minimum five years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces.

B. Store finish carpentry items in installation areas. If finsh carpentry items must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

C. Stack lumber and provide for adequate air circulation within and around stacks and under temporary coverings.

D. Protect work from moisture damage prior to installation.

1.06 ENVIRONMENTAL CONDITIONS

A. Comply with specified standard and as additionally specified.

B. Do not deliver finish carpentry items until environmental conditions meet specified requirements for installation areas.

C. Do not deliver or install finish carpentry items until building is enclosed and weatherproof, wet work in installation areas is complete and nominally dry, and building's environmental control systems are operating and will maintain temperature and relative humidity at designed occupancy levels throughout the remainder of the construction period.

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

A. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI/AWMAC/WI (AWS) for Premium Grade.

B. Interior Woodwork Items:
   1. Moldings, Bases, Casings, and Miscellaneous Trim: Ash; prepare for stain and transparent finish.

2.02 LUMBER MATERIALS

A. Softwood Lumber: PS 20; Maple species, plain sawn, maximum moisture content of 6 percent according to ASTM D4442; with vertical grain, of quality suitable for transparent finish.

2.03 FASTENINGS

A. Fasteners: Of size and type to suit application; galvanized finish.

B. Concealed Joint Fasteners: Threaded steel.

2.04 ACCESSORIES

A. Primer: Alkyd primer sealer.

B. Wood Filler: Solvent base, tinted to match surface finish color.

2.05 FABRICATION

A. Shop assemble work for delivery to site, permitting passage through building openings.

B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

2.06 FINISHING

A. Sand work smooth and set exposed nails and screws.

B. Apply wood filler in exposed nail and screw indentations.

C. On items to receive transparent finishes, use wood filler that matches surrounding surfaces and is of type recommended for the applicable finish.

D. Finish work in accordance with AWI/AWMAC/WI (AWS), Section 5 - Finishing for grade specified and as follows:
   1. Transparent:
      a. System - 12, Polyurethane, Water-based.
      b. Stain: As selected by Architect.
      c. Sheen: Satin.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify adequacy of backing and support framing.

3.02 INSTALLATION

A. Install work in accordance with AWI/AWMAC/WI (AWS) requirements for grade indicated.

B. Set and secure materials and components in place, plumb and level.

C. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

D. Install components with finish nails at maximum 8 inch on center.

E. Install finish carpentry items with minimum number of joints practical, using full length pieces from maximum lengths of lumber available. Do not use individual pieces less than 24 inches long, except where necessary.
   1. Stagger joints in adjacent and related standing and running trim.
   2. Cope at returns and miter at corners to produce tight-fitting joints with full surface contact throughout the length of joints.
   3. Plane back surfaces of casings as required to provide uniform thickness and flush finished surfaces across joints.

F. Install trim after finishing of substrate surfaces is complete.

G. Pre-drill pilot holes in hardwood carpentry items before fastening to prevent splitting. Securely fasten to prevent warping or movement.

3.03 PREPARATION FOR SITE FINISHING

A. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.

3.04 TOLERANCES

A. Maximum Variation from True Position: 1/16 inch.

B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

3.05 PROTECTION

A. Protect installed finish carpentry items from damage due to subsequent construction operations.

END OF SECTION

SECTION 06 4100

ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Specially fabricated cabinet units.

B. Cabinet hardware.

C. Factory finishing.

D. Preparation for installing utilities.

1.02 RELATED REQUIREMENTS

A. Section 09 3000 - Tiling: Tile insets in architectural wood casework.

B. Section 12 3600 - Countertops: Countertops for casework.

1.03 REFERENCE STANDARDS

A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards.

B. BHMA A156.9 - American National Standard for Cabinet Hardware; Builders Hardware Manufacturers Association (ANSI/BHMA A156.9).

C. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; Hardwood Plywood & Veneer Association (ANSI/HPVA HP-1).

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate fabrication schedule with construction progress to avoid delaying the Work.
   1. Field verify critical dimensions and clearances prior to fabrication of casework items; assure that field conditions are as required to comply with indicated design requirements.
   2. By accurate field measurements before being enclosed, verify locations of concealed framing, blocking, reinforcements, and furring that support woodwork; record measurements on shop drawings.
   3. Where field measurements cannot be made without delaying work, establish required dimensions and maintain those dimensions for fabrication of woodwork.
   4. Coordinate construction to ensure that actual dimensions correspond to established required dimensions.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
   1. Minimum Scale of Detail Drawings: 1-1/2 inch to 1 foot.
   2. Provide the information required by AWI/AWMAC/WI (AWS).
   3. Shop drawings are required to be generated as separate digital drawings specific to this Project, not utilizing Architect's digital drawing files in any manner; comply with other restrictions on use of Architect's digital drawing files specified in Section 01 3000.
   4. Show all adjacent construction including abutting walls, columns and similar elements affecting casework installation.

C. Product Data: Provide data for hardware accessories.

D. Samples: Submit actual samples of architectural cabinet face construction, minimum 12 inches square, illustrating proposed cabinet substrate and finish.

1.06 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver casework items to installation areas only after clean, well ventilated, and temperature-controlled installation areas are available. Do not deliver casework items to installation areas until painting and similar operations are complete in those areas.

B. Protect units from moisture and impact damage during transit, delivery, and storage; use protective covers during delivery, storage, and handling operations.

1.08 ENVIRONMENTAL CONDITIONS

A. Do not deliver or install casework items until building is enclosed and weatherproof, and building's environmental control systems are operating and will maintain temperature and relative humidity at designed occupancy levels throughout the remainder of the construction period.

B. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.01 CABINETS

A. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI//AWMAC/WI (AWS) for Premium Grade.

B. Wood Veneer Faced Cabinets:
   1. Exposed Surfaces: HPVA Grade A, Maple, plain sliced, book-matched.
   2. Semi-Exposed Surfaces: HPVA Grade B, Maple, plain sliced, slip-matched.
   3. Concealed Surfaces: HPVA Grade C, fabricator's standard, plain sliced, random-matched.

2.02 COUNTERTOPS

A. Countertops: Specified in Section 12 3600.

2.03 ACCESSORIES

A. Adhesive: Type recommended by AWI/AWMAC to suit application.

B. Counter Support Brackets: Tempered, fabricated steel brackets designed for surface or flush mounting as indicated; sizes and configurations as indicated.

C. Porcelain Tile Insets: As specified in Section 09 3000.

D. Fasteners: Size and type to suit application.

E. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.

F. Concealed Joint Fasteners: Threaded steel.

G. Grommets: Standard plastic or painted metal grommets for cut-outs, in color to match adjacent surface.

2.04 HARDWARE

A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.

B. Drawer and Door Pulls: "U" shaped wire pull, steel with satin finish, 4 inch centers.

C. Cabinet Locks: Keyed cabinet-grade lock, two keys per lock, steel with satin finish.

D. Drawer Slides:
   1. Type: Full extension with overtravel.
   2. Static Load Capacity: Commercial grade.
   3. Mounting: Side mounted.
   4. Stops: Integral type.
   5. Features: Provide self closing/stay closed type.

E. Standard Hinges: European style concealed, self-closing type, steel with satin finish.

2.05 FABRICATION

A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.

B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.

D. Matching Wood Grain: Comply with requirements of quality standard for specified Grade and as follows:
1. Provide balance matchedpanels at each elevation.
2. Provide sequence matching across each elevation.

E. Provide cutouts for plumbing fixtures. Verify locations of cutouts from on-site dimensions. Prime paint cut edges.

2.06 SHOP FINISHING

A. Sand work smooth and set exposed nails and screws.

B. Finish work in accordance with AWI/AWMAC/WI (AWS), Section 5 - Finishing for grade specified and as follows:
1. Transparent:
a. System - 12, Polyurethane, Water-based.
b. Stain: As selected by Architect.
c. Sheen: Satin.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify adequacy of backing and support framing.

B. Verify location and sizes of utility rough-in associated with work of this Section.

C. Verify critical clearances and dimensions prior to installation of casework items.

3.02 INSTALLATION

A. Install work in accordance with AWI/AWMAC/WI (AWS) requirements for grade indicated.

B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.

C. Use fixture attachments in concealed locations for wall mounted components.

D. Use concealed joint fasteners to align and secure adjoining cabinet units.

E. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

F. Secure cabinets to floor using appropriate angles and anchorages.

G. Secure full height cabinets, shelving units, and similar casework items exceeding 60 inches in height to floor using appropriate angles and anchorages.

H. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.03 ADJUSTING

A. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

3.05 PROTECTION

A. Protect installed casework items from damage due to subsequent construction operations.

END OF SECTION

SECTION 07 9200

JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Nonsag gunnable joint sealants.

B. Joint backings and accessories.

1.02 REFERENCE STANDARDS

A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer.

B. ASTM C834 - Standard Specification for Latex Sealants.

C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.

D. ASTM C1193 - Standard Guide for Use of Joint Sealants.

E. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.

F. SWRI - Sealant, Waterproofing and Restoration Institute; Sealants: The Professionals' Guide.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate sealant work with other work requiring sealants, and with other Sections referencing this Section; do not obstruct indicated or required moisture weepage systems under any circumstances.
   2. Coordinate sealant surface preparation of exterior joint sealants scheduled for paint finish with Section 09 9113. Provide advice and recommendations on compatibility of specified preparation procedures with sealants used.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
   1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
   2. List of backing materials approved for use with the specific product.
   3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
   4. Substrates the product should not be used on.

C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

1.05 QUALITY ASSURANCE

A. Conform to SWRI recommendations for materials and installation.

B. Installer Qualifications: Company specializing in performing the work of this Section with minimum three years documented experience.

C. System Compatibility: Assume responsibility for confirming that sealants are compatible with each other as as system, and also compatible with substrate surfaces with which they will be in contact, including but not limited to wall and sheathing surfaces, opening materials, other flashings and weather barrier materials.
   1. Assure that system components are compatible as specified prior to preparing and making specified submittals.
   2. Assume responsibility for removal of incompatible system components and installation of properly compatible components at no additional cost to Owner regardless of when incompatibility is discovered.

1.06 FIELD CONDITIONS

A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.
   1. Install sealants only when temperature is in lower third of manufacturer's recommended installation temperature range wherever joint width is affected by ambient temperature variations.
   2. Install sealants only when ambient temperature conditions can be maintained at or above 40 degrees F during installation and 48 hours immediately following installation.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in original, unopened containers or bundles with labels indicating manufacturer, product name and designation, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

A. Sealant Scope:
   1. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
      a. Joints between door, window, and other frames and adjacent construction.
      b. Other joints indicated below.

B. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.
   1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.
   2. Wall and Ceiling Joints in Wet Areas: Nonsag polyurethane sealant for continuous liquid immersion.
   3. Floor Joints in Wet Areas: Nonsag polyurethane "nontraffic-grade" sealant suitable for continuous liquid immersion.
   4. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant.

2.02 JOINT SEALANTS - GENERAL

A. Hardness: As recommended by manufacturer for applications shown.

B. Modulus of Elasticity: Provide lowest available modulus of elasticity for indicated requirements and consistent with exposure to weathering, indentation, abrasion and support of loading.

C. Compatibility: Provide sealants, joint fillers, and related materials that are compatible with one another and with substrates and other materials to which they will be exposed in the joint system.

D. Grade: For each application, provide grade of sealant complying with ASTM C920, and as recommended by manufacturer for indicated conditions, to achieve best possible performance. Types, grades, classes, and uses specified are for normal conditions.

E. Colors: As selected from manufacturer's full line, unless otherwise specified.

2.03 NONSAG JOINT SEALANTS

A. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
   1. Color: White.

B. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent; not expected to withstand continuous water immersion or traffic.
   1. Movement Capability: Plus and minus 25 percent, minimum.
   2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
   3. Service Temperature Range: Minus 40 to 180 degrees F.

C. Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface .
   1. Movement Capability: Plus and minus 35 percent, minimum.
   2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
   3. Service Temperature Range: Minus 40 to 180 degrees F.

D. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, non-staining, non-bleeding, non-sagging; not intended for exterior use.

2.04 ACCESSORIES

A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific applications.
   1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B - Bi-Cellular Polyethylene.
   2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type C - Closed Cell Polyethylene.
   3. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.

B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.

D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.

E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that joints are ready to receive work.

B. Verify that backing materials are compatible with sealants.

C. Verify that backer rods are of the correct size.

3.02 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Perform installation in accordance with ASTM C1193.

C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
   1. Provide joints sized for width/depth ratios according to ASTM C1472.

D. Multiple backer rods are not permitted; use single backer rod properly sized to joint width.

E. Install bond breaker backing tape where backer rod cannot be used.

F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

G. Do not obstruct indicated or required moisture weepage systems under any circumstances.

H. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.

I. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

END OF SECTION

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SECTION 08 1213

HOLLOW METAL FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Non-fire-rated hollow metal frames for non-hollow metal doors.

B. Interior glazed borrowed lite frames.

1.02 REFERENCE STANDARDS

A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.

B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors.

C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100).

D. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.

E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

F. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.

G. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.

H. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames.

I. ICC A117.1 - Accessible and Usable Buildings and Facilities.

J. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames.

K. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames.

L. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.

C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Store in accordance with applicable requirements and in compliance with standards and/or custom guidelines as indicated.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Steel used for fabrication of frames shall comply with one or more of the following requirements; Galvannealed steel conforming to ASTM A653/A653M, cold-rolled steel conforming to ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel conforming to ASTM A1011/A1011M, Commercial Steel (CS) Type B for each.

B. Accessibility: Comply with ICC A117.1 and ADA Standards.

C. Hardware Preparations, Selections and Locations: Comply with BHMA A156.115, NAAMM HMMA 830 and NAAMM HMMA 831 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

D. Frames for Interior Glazing or Borrowed Lites: Construction and face dimensions to match door frames, and as indicated on Drawings.

2.02 HOLLOW METAL DOOR FRAMES WITH INTEGRAL CASINGS

A. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
   1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
      a. Level 2 - Heavy-duty.
      b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
      c. Frame Metal Thickness: 16 gage, 0.053 inch, minimum.
   2. Frame Finish: Factory primed and field finished.

2.03 ACCESSORIES

A. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.

2.04 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 INSTALLATION

A. Install frames in accordance with manufacturer's instructions and related requirements of specified frame standards or custom guidelines indicated.

B. Coordinate frame anchor placement with wall construction.

C. Coordinate installation of glazing.

D. Coordinate installation of hardware.

3.03 TOLERANCES

A. Maximum Diagonal Distortion: 1/16 inch measured with straight edges, crossed corner to corner.

3.04 SCHEDULE

A. Refer to Door and Frame Schedule on Drawings.

END OF SECTION

SECTION 08 1416

FLUSH WOOD DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Flush wood doors; flush configuration; non-rated.

1.02 REFERENCE STANDARDS

A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards.

B. WDMA I.S. 1A - Interior Architectural Wood Flush Doors.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the work with door opening construction, door frame and door hardware installation.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.

C. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.

D. Samples: Submit accepted manufacturer’s stain color selector guide.
   1. After initial color selection, submit two samples 12 x 12 inch in size illustrating selected stain color, face veneers, plastic laminates for selection, and specified finishes.

1.05 QUALITY ASSURANCE

A. Obtain all doors of each type specified from a single manufacturer to assure uniformity of appearance and construction.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.

B. Accept doors on site in manufacturer's packaging. Inspect for damage.

C. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers - Wood Veneer Faced Doors:
   1. Algoma Hardwoods, Inc.: www.algomahardwoods.com.
   2. Eggers Industries: www.eggersindustries.com.
   3. Graham Wood Doors: www.grahamdoors.com.
   4. Haley Brothers: www.haleybros.com.
   5. Marshfield DoorSystems, Inc.: www.marshfielddoors.com.
   6. Oregon Door: www.oregondoor.com.
   7. Substitutions: See Section 01 6000 - Product Requirements.

2.02 DOORS

A. Doors:
   1. Quality Level: Premium Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS) or WDMA I.S. 1A.
   2. Wood Veneer Faced Doors: 5-ply or 7-ply unless otherwise indicated.

B. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
   1. Provide solid core doors at each location.

2.03 DOOR AND PANEL CORES

A. General Requirement: Provide door cores fully bonded to stiles and rails.

B. Non-Rated Solid Core Doors: Type particleboard core (PC), plies and faces as indicated.

2.04 DOOR FACINGS

A. Veneer Facing for Transparent Finish: Red oak, HPVA Grade AA, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
   1. Vertical Edges: Same species as face veneer, solid wood edges, minimum 0.25 inch thick.
   2. "Pair Match" each pair of doors; "Set Match" pairs of doors within 10 feet of each other when doors are closed.

B. Facing Adhesive: Type I - waterproof.

2.05 ACCESSORIES

A. Hollow Metal Door Frames: As specified in Section 08 1213.

B. Glazing Stops - Non-Rated Doors: Wood, of same species as door facing, mitered corners; prepared for countersink style tamper proof screws.

2.06 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores constructed with stiles and rails:
   1. Provide solid blocks at lock edge and top of door for closer for hardware reinforcement.
      a. Provide solid blocking for other throughbolted hardware.
   2. Provide minimum 6 inch high solid wood top rail and minimum 16 inch high solid wood bottom rail, all doors; fire-resistant treated at fire-rated doors.

C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

E. Provide edge clearances in accordance with the quality standard specified.

2.07 FACTORY FINISHING - WOOD VENEER DOORS

A. Finish work in accordance with AWI/AWMAC/WI (AWS), Section 5 - Finishing for grade specified and as follows:
   1. Transparent:
      a. System - 12, Polyurethane, Water-based.
      b. Stain: As selected by Architect.
      c. Sheen: Satin.

B. Finish work in accordance with WDMA I.S. 1A for Grade specified and as follows:
   1. Transparent:
      a. System - TR-8, UV Cured Acrylated Polyester/Urethane.
      b. Stain: As selected by Architect.
      c. Sheen: Satin.

C. Factory finish doors in accordance with approved sample.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.02 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard.

B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.

C. Adjust width of non-rated doors by cutting equally on both jamb edges.
   1. Trim maximum of 3/4 inch off bottom edges.

D. Use machine tools to cut or drill for hardware.

3.03 TOLERANCES

A. Conform to specified quality standard for fit and clearance tolerances.

B. Conform to specified quality standard for telegraphing, warp, and squareness.

C. Maximum Undercut at Fire-Rated Doors: 3/4 inch clearance to non-combustible finish floor surface.

3.04 ADJUSTING

A. Adjust doors for smooth and balanced door movement.

B. Adjust closers for full closure.

C. Restore finish on all edges of shop finished doors before installation, if fitting or machining is required on site.

3.05 SCHEDULE

A. Refer to Door and Frame Schedule on the Drawings.

END OF SECTION

SECTION 08 8000

GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Monolithic glazing units.

B. Glazing compounds and accessories.

1.02 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.

B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test.

C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.

D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.

E. ASTM C1036 - Standard Specification for Flat Glass.

F. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.

G. ASTM C1193 - Standard Guide for Use of Joint Sealants.

H. GANA (GM) - GANA Glazing Manual.

I. GANA (SM) - GANA Sealant Manual.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.

C. Samples: Submit two samples 12 by 12 inch in size of glass units.

1.04 QUALITY ASSURANCE

A. Perform Work in accordance with GANA Glazing Manual for glazing installation methods.

B. Provide each type of glass, primary sealant, and gasket from a single manufacturer with not less than five years documented experience in the production of required materials.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Comply with manufacturer's instructions for shipping, handling, storing, and protection of glass and glazing materials. Exercise exceptional care to prevent edge damage to glass.

PART 2 PRODUCTS

2.01 GLASS MATERIALS

A. Float Glass: Provide float glass based glazing unless noted otherwise.
   1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality-Q3.
   2. Heat-Strengthened and Fully Tempered Types: ASTM C1048, Kind HS and FT.
   3. Fully Tempered Safety Glass: Complies with ANSI Z97.1 and 16 CFR 1201 criteria.
   4. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.

2.02 MONOLITHIC GLAZING UNITS

A. General - Combined Requirements: If a particular glass unit is indicated to comply with more than one type of requirement, such as color, safety characteristics, or other requirements. Comply with all specified requirements for each type as scheduled on Drawings.

B. Monolithic Interior Vision Glazing:
   1. Applications: Interior glazing unless otherwise indicated.
   2. Glass Type: Fully tempered float glass.
   3. Tint: Clear.
   4. Thickness: 1/4 inch, nominal.
   5. Glazing Method: Wet/dry glazing method, preformed tape and sealant.

2.03 PLASTIC FILMS

A. Plastic Film: Mylar type.
   1. Application: Locations indicated on the Drawings.
   2. Acceptable Products:
      a. 3M Window Film: www.3m.com/US/arch_construct/scpd/windowfilm.
         1) Graphic Film Product: Fasara Decorative Window Film; pattern and color as indicated on Drawings.
      b. Substitutions: Refer to Section 01 6000 - Product Requirements.

2.04 GLAZING COMPOUNDS

A. General Requirements:
   1. Provide black exposed glazing accessory materials, unless specifically indicated otherwise.
   2. Provide materials of hardness as recommended by manufacturer for required application and condition of installation in each case. Provide only compounds which are known to be fully compatible with surfaces contacted, including glass products, seals, and glazing channel surfaces.

B. Butyl Sealant: Single component; ASTM C920, Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.

2.05 ACCESSORIES

A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.

B. Spacer Shims: Silicone, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.

C. Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; coiled on release paper; black color.
   1. Width: As required for application.
   2. Thickness: As required for application.
   3. Spacer Rod Diameter: As required for application.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.

B. Verify that the minimum required face and edge clearances are being provided.

C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

D. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION - GENERAL

A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.

B. Install glazing sealants in accordance with ASTM C1193, GANA Sealant Manual, and manufacturer's instructions.

C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.

E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.

F. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, etc.

3.03 INSTALLATION - WET/DRY GLAZING METHOD (PREFORMED TAPE AND SEALANT)

A. Application - Exterior Glazed: Set glazing infills from the exterior of the building.

B. Cut glazing tape to length and set against permanent stops, 3/16 inch below sight line. Seal corners by butting tape and dabbing with butyl sealant.

C. Apply heel bead of butyl sealant along intersection of permanent stop with frame ensuring full perimeter seal between glass and frame to complete the continuity of the air and vapor seal.

D. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

E. Rest glazing on setting blocks and push against tape and heel bead of sealant with sufficient pressure to attain full contact at perimeter of pane or glass unit.

F. Install removable stops, with spacer strips inserted between glazing and applied stops 1/4 inch below sight lines.
   1. Place glazing tape on glazing pane of unit with tape flush with sight line.

G. Fill gap between glazing and stop with butyl type sealant to depth equal to bite of frame on glazing, but not more than 3/8 inch below sight line.

H. Apply cap bead of butyl type sealant along void between the stop and the glazing, to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.04 INSTALLATION - PLASTIC FILM

A. Install plastic film with adhesive, applied in accordance with film manufacturer's instructions.

B. Place without air bubbles, creases or visible distortion.

C. Install film tight to perimeter of glass and carefully trim film with razor sharp knife. Provide 1/16 inch to 1/8 inch gap at perimeter of glazed panel unless otherwise required. Do not score the glass.

3.05 CLEANING

A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.

B. Remove non-permanent labels immediately after glazing installation is complete.

C. Clean glass and adjacent surfaces after sealants are fully cured.

D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.06 PROTECTION

A. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION

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SECTION 09 2116

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Metal stud framing.

B. Acoustic insulation.

C. Gypsum wallboard.

D. Joint treatment and accessories.

1.02 REFERENCE STANDARDS

A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.

B. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation.

C. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members.

D. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.

E. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.

F. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications.

G. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.

H. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.

I. ASTM C1396/C1396M - Standard Specification for Gypsum Board.

J. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.

K. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

L. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate with mechanical and electrical work. Do not attach or support metal framing to ducts, pipes, conduit, or similar items.
   2. Coordinate installation of ceiling suspension system with installation of overhead structural systems to ensure that inserts and other structural anchorage provisions have been installed to receive ceiling anchors in a manner that will develop their full strength and at spacing required to support ceiling.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing gypsum board application and finishing, with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store and protect products in accordance with referenced standards.

B. Handle gypsum boards to prevent damage to ends, edges, and surfaces.

1.07 FIELD CONDITIONS

A. Maintain ambient temperatures at not less than 40 degrees F for non-adhesive attachment of gypsum board, and not less than 50 degrees F for adhesive attachment.

B. Maintain ambient temperatures at not less than 50 degrees F for a period 48 hours before gypsum board finishing, during installation, and after installation of board materials.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

2.02 METAL FRAMING MATERIALS

A. Metal Framing - General: Provide framing materials complying with specified standards and tested assemblies; galvanized sheet steel, 25 gage unless specified, noted, scheduled, or detailed otherwise.
   1. Use minimum 20 gage studs at door jambs, tile backing support, and other locations indicated.

B. Metal Framing System Components - Non-Loadbearing: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.
   1. Studs: "C" shaped with flat or formed webs.
   2. Runners: U shaped, sized to match studs.
   3. Stud System Accessories: Manufacturer's standard clips, shoes, ties, reinforcements, fasteners, and other accessories as required for a complete stud framing system.

C. Partition Head To Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and screwed to secondary deflection channel set inside but unattached to top track.

2.03 BOARD MATERIALS

A. Gypsum Board: Gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Applications: Use for vertical surfaces and ceilings, unless otherwise indicated.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
      a. Mold-resistant board is required whenever board is being installed before the building is enclosed and conditioned.
   3. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
   4. Thickness: As indicated on Drawings.
      a. Multi-Layer Assemblies: Thicknesses as indicated on Drawings.
   5. Acceptable Paper-Faced Products:
      a. Georgia-Pacific Gypsum; ToughRock.
      b. National Gypsum Company; Gold Bond Gypsum Board.
      c. Substitutions: See Section 01 6000 - Product Requirements.
   6. Acceptable Mold-Resistant Paper-Faced Products:
      a. Georgia-Pacific Gypsum; ToughRock Mold-Guard.
      b. National Gypsum Company; Gold Bond XP Gypsum Board.
      c. Substitutions: See Section 01 6000 - Product Requirements.

B. Gypsum Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
   1. Applications: Ceilings and vertical surfaces in "wet" areas but not behind thinset tile.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   3. Thickness: As indicated on Drawings.

4. Edges: Tapered.
5. Acceptable Products:
   a. Georgia-Pacific Gypsum; ToughRock Mold-Guard Gypsum Board.
   b. National Gypsum Company; Gold Bond XP Gypsum Board.
   c. Substitutions: See Section 01 6000 - Product Requirements.

2.04 ACCESSORIES

A. Acoustic Insulation: ASTM C612; semi-rigid mineral fiber, unfaced; flame spread index of 0 (zero) when tested in accordance with ASTM E84.
   1. Thickness: Full thickness of indicated wall framing.
   2. Acceptable Manufacturers:
      a. Thermafiber, Inc.: www.thermafiber.com.
      b. Roxul, Inc.: www.roxul.com.
      c. Substitutions: See Section 01 6000 - Product Requirements.

B. Finishing Accessories: ASTM C1047, galvanized steel, rolled zinc, or rigid plastic, unless noted otherwise.
   1. Types: As detailed or required for finished appearance.
   2. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.
   3. Control Joints: One-piece, v-grooved control joint with integral perforated flanges; removable tape to protect v-groove during finishing.

C. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
   1. Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
   2. Joint Compound for Wet Locations: Chemical quick-setting type for first 2 coats, and vinyl type top coat specially formulated for finishing topping.

D. Screws for Fastening of Gypsum Panel Products to Wood and Steel Members: ASTM C954; steel drill screws, corrosion resistant.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this Section before commencing work of this Section.

3.02 FRAMING INSTALLATION

A. Framing Systems: Install in accordance with ASTM C754 and manufacturer's instructions.

B. Studs: Space studs as permitted by standard or as specified below.
   1. Space studs 16 inches on center, except as otherwise indicated or required by specified tested assemblies, and secure to floor and ceiling runners with screws.
   2. Provide supplemental framing matching primary wall framing to support cut edges of gypsum boards not supported by primary vertical wall framing members.
   3. Extend partition framing to structure where indicated and to ceiling in other locations.
   4. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
   5. Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging.

C. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

3.03 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Where sound-rated wallboard work is indicated, seal the work at perimeters, control and expansion joints, openings and penetrations with a continuous bead of acoustical sealant including a bead at both faces of partitions.
   1. Comply with ASTM C919 and manufacturer's recommendations for location of beads, and close off sound-flanking paths around or through the work, including sealing of partitions above acoustical ceilings.

3.04 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
   1. Space fasteners in accordance with ASTM C840 and manufacturer's recommendations, unless fastener spacing is otherwise specified on structural Drawings for structural load-bearing walls.
   2. Install interior wall and partition boards vertically, except where fire or sound rating requires a particular direction; comply with the method stated in the tested assembly data.
   3. Locate exposed end-butt joints as far from center of walls and ceilings as possible, and stagger not less than 24 inches in alternate courses of board.

B. Single-Layer Non-Rated Applications: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
   1. Exception: Tapered edges to receive joint treatment at right angles to framing.

C. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces as indicated on Drawings; if not specifically indicated, provide control joints as follows:
   1. Not more than 30 feet apart on walls and ceilings over 50 feet long.

B. Corner Beads: Install at external corners, using longest practical lengths.

C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.06 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
   2. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
   3. Level 1: Wall areas above finished ceilings, whether or not accessible in the completed construction.

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.
   2. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile and fixed cabinetry.
   3. Taping, filling and sanding is not required at base layer of double layer applications.

C. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

3.07 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

SECTION 09 3000

TILING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Tile for floor applications.

B. Tile for wall applications.

C. Cementitious backer board as tile substrates on architectural wood casework insets.

D. Ceramic trim.

E. Non-ceramic trim.

1.02 REFERENCE STANDARDS

A. ANSI A108/A118/A136.1 - American National Standard Specifications for the Installation of Ceramic Tile.

B. ASTM C499 - Standard Test Method for Facial Dimensions and Thickness of Flat, Rectangular Ceramic Wall and Floor Tile.

C. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation.

1.03 DEFINITIONS

A. Module Size: Actual tile size, with minor facial dimension as measured by ASTM C499, plus joint width indicated.

B. Facial Dimension: Actual tile size, with minor facial dimension as measured by ASTM C499.

C. Large Format Tile: Any tile unit that maintains an edge of 15 inches or greater in any dimension.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate location of tiling movement joints on concrete floor substrates with locations of concrete floor expansion and control joints; align substrate joints and tiling system joints where required by specified reference standards.

B. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this Section; require attendance by all affected installers.
   1. Convene under general provisions of Section 01 7000.
   2. Review installation procedures and coordination requirements.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

C. Samples: Submit manufacturer’s color boards consisting of actual tiles showing full range of colors, textures, and patterns available for each type and composition of tile specified.
   1. Include samples of specified accessories requiring color selection.
   2. Submit manufacturer’s color samples of available grout consisting of actual sections of grout showing full range of colors available for each type of grout specified.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods.

1.06 QUALITY ASSURANCE

A. Maintain one copy of and ANSI A108/A118/A136.1 and TCNA (HB) on site.

B. Installer Qualifications: Company specializing in performing tile installation, with minimum of five years of documented experience.

C. Provide materials obtained from only one manufacturer for each type and color of tile, and for each type of mortar, grout, adhesive, and sealant.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.08 FIELD CONDITIONS

A. Comply with referenced standards and manufacturer's recommendations for protection and maintenance of environmental conditions during and after installation.

B. Do not install solvent-based products in an unventilated environment.

C. Maintain ambient and substrate temperature of 50 degrees F during installation, and for at least seven days after installation. Maintain higher temperatures for proprietary mortars and grouts when recommended by manufacturer.

D. Vent temporary heaters to the exterior to prevent damage to tile work due to carbon dioxide accumulation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers:
   1. Manufacturers and products specified on Drawings.
   2. Substitutions: Not permitted.

2.02 TILING MATERIALS

A. Materials and Colors: Manufacturers and products specified on Drawings.

2.03 TRIM AND ACCESSORIES

A. Ceramic Trim: Matching bullnose, double bullnose, cove base, and cove ceramic shapes in sizes coordinated with field tile.
   1. Applications:
      a. Open Edges: Bullnose.
      b. Inside Corners: Jointed.
      c. Floor to Wall Joints: Cove base.
   2. Acceptable Manufacturer: Same as for corresponding tile.

B. Metal Trim: Satin natural anodized extruded aluminum, style, configuration, and dimensions to suit application, for setting using tile mortar or adhesive.
   1. Applications:
      a. Open edges of floor tile.
      b. Borders and other trim as indicated on Drawings.
   2. Acceptable Manufacturers:
      a. Schluter-Systems: www.schluter.com.
      b. Genesis APS International: www.genesis-aps.com.
      c. Substitutions: See Section 01 6000 - Product Requirements.

2.04 SETTING MATERIALS

A. Setting Materials - General:
   1. Use only the types of mortar bed materials to set the types of tile for which the mortar is labeled.

B. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4.
   1. Color: White at glass tile applications; manufacturer's standard gray color at allother applications.

2.05 GROUTS

A. Single Component Grout: Complies with performance criteria of ANSI A118.3, ANSI 118.6, and ANSI A118.7; polymer and inorganic component cement grout.
   1. Applications: Use this type of grout in all applications indicated on Drawings.
   2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
   3. Prohibitions: Do not use grout sealers with this grout type.
   4. Color(s): As selected by Architect from manufacturer's full line.
   5. Acceptable Products:
      a. Custom Building Products; Fusion Pro Single Component Grout: www.custombuildingproducts.com.
      b. Mapei Corporation; Flexcolor CQ: www.mapei.com.
      c. Substitutions: See Section 01 6000 - Product Requirements.

2.06 ACCESSORY MATERIALS

A. Cementitious Backer Board: ANSI A118.9; high density, glass fiber reinforced, 1/4 inch thick; 2 inch wide coated glass fiber tape for joints and corners.
   1. Applications: Tile insets in architectural wood casework.
   2. Acceptable Products:
      a. Custom Building Products; WonderBoard Lite Backerboard: www.custombuildingproducts.com.
      b. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of setting materials to sub-floor surfaces.

D. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for tile flooring installation by testing for moisture and pH.
   1. Test in accordance with ASTM F710.
   2. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Protect surrounding work from damage.

B. Vacuum clean surfaces and damp clean.

C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

D. Install backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to a feather edge.

E. Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

3.03 INSTALLATION - GENERAL

A. Install tile and grout in accordance with applicable requirements of ANSI A108.1A thru A108.13, manufacturer's instructions, and TCNA (HB) recommendations.

B. Blending: For tile exhibiting color or pattern variations within the ranges of accepted submittals, verify that tile has been blended in the packages so that tile units taken from one package show same range in colors or patterns as those taken from other packages. If not blended in the packages, blend tile in the field before installation.

C. Floor System Coverage: Where specified for individual setting methods, install floor tile units with 100 percent mortar coverage by complying with applicable special requirements for back buttering of tile units in referenced ANSI A108 specifications.

D. Movement Joints: Comply with TCNA (HB) Method EJ171F requirements for locations, spacing, and installation of applicable movement joints, whether or not specifically indicated or detailed on Drawings, and as follows:
   1. Spacing - Interior: Maximum 24 feet on center in each direction; reduce spacing to maximum 10 feet on center in areas exposed to direct sunlight or moisture.
   2. Joint Width: Match adjacent grouted joint widths, unless TCNA EJ171 requires a specific joint width based on joint location or joint service conditions.
   3. Apply sealant joint to junction of tile and dissimilar materials and junction of dissimilar planes, including but not limited to floor to wall joints, corners, and metal trim and non-ceramic accessory items.
   4. Keep movement joints free of setting adhesive and grout.
   5. Form internal angles and corners square, not grouted, with sealant joint.
   6. Form external angles and corners square, not grouted, with sealant joint.
   7. Apply specified sealant to joints.

E. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.

F. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly.

G. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.

H. Install non-ceramic trim in accordance with manufacturer's instructions.

I. Sound tile after setting. Replace hollow sounding units.

J. Keep control and expansion joints free of mortar, grout, and adhesive.

K. Prior to grouting, allow installation to completely cure; minimum of 48 hours.

L. Grout tile joints, except where movement joints are indicated or specified.

M. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

N. Allow completed tiling assemblies to cure full 72 hours before allowing heavy foot or equipment traffic on final installations.

3.04 INSTALLATION - FLOORS - THIN-SET METHODS

A. Over interior concrete substrates, install in accordance with TCNA (HB) Method F113, latex-Portland cement bond coat, with specified grout.
   1. Provide 100 percent coverage of setting mortar over tile back surfaces.

3.05 INSTALLATION - WALL TILE

A. Over cementitious backer units on studs and on architectural wood casework, install in accordance with TCNA (HB) Method W244.

B. Over coated glass mat backer board on studs, install in accordance with TCNA (HB) Method W245.

3.06 TOLERANCES

A. Comply with applicable requirements of ANSI A108.2, unless otherwise specified in this Section.

B. Flatness - Finished Tiling Surfaces:
   1. Ceramic Tile: 1/4 inch in 10 feet.
   2. Stone Tile: 1/8 inch in 10 feet.

C. Lippage - Adjacent Tile Units:
   1. Glazed Wall Tile and Mosaic Tile: 1/32 inch; joint width 1/16 inch to 1/8 inch; 1 x 1 inch to 6 x 6 inch tile size.
   2. Quarry Tile: 1/16 inch; joint width 1/4 inch or greater; 6 x 6 inch to 8 x 8 inch tile size.
   3. Pressed Floor Tile and Porcelain Tile: 1/32 inch; joint width 1/16 inch to less than 1/4 inch; all tile sizes.
   4. Pressed Floor Tile and Porcelain Tile: 1/16 inch; joint width greater than 1/4 inch; all tile sizes.

3.07 CLEANING

A. Clean tile and grout surfaces.

B. Unglazed tile may be cleaned with sulfamic acid solutions only when permitted by the tile and grout manufacturer's printed instructions, but not sooner than 14 days after completion of installation. Protect metal surfaces, iron, and vitreous fixtures from effects of acid cleaning. Flush surfaces with clean water before and after acid cleaning.

C. Leave finished installation clean and free of cracked, chipped, broken, un-bonded, or otherwise defective tile work.

3.08 PROTECTION

A. Do not permit traffic over finished floor surface for minimum 7 days after installation.

END OF SECTION

SECTION 09 5100

SUSPENDED ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Repair and selective replacement of the following:
   1. Suspended metal grid ceiling system.
   2. Acoustical units.

1.02 REFERENCE STANDARDS

A. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

B. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

C. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on suspension system components and acoustical units.

C. Samples: Submit two samples minimum 6 x 6 inch in size illustrating material and finish of acoustical units.

1.04 FIELD CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 20 to 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers - Acoustic Panels: Match existing.
   1. Substitutions: Not permitted.

B. Acceptable Manufacturers - Suspension Systems:
   1. Same as for acoustical units.

2.02 ACOUSTICAL UNITS

A. Acoustical Units - General: ASTM E1264, Class A.
   1. Panel Design and Color: Match existing.

2.03 SUSPENSION SYSTEMS

A. Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.

B. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled; intermediate-duty.
   1. Profile: Tee; 15/16 inch wide face.
   2. Construction: Double web.
   3. Finish: White painted.

2.04 ACCESSORIES

A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

B. Perimeter Trim Profiles: Same material and finish as grid.
   1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid.

C. Acoustical Insulation: ASTM C665, friction fit type, unfaced batts.
   1. Thickness: 3-1/2 inches.
   2. Size: To fit acoustical suspension system.

D. Acoustical Sealant For Perimeter Moldings: Non-hardening, non-skinning, for use in conjunction with suspended ceiling system.

E. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

3.02 INSTALLATION - SUSPENSION SYSTEM

A. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

B. Locate system on orientation according to reflected ceiling plan.

C. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.

D. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

E. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

F. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

G. Do not eccentrically load system or induce rotation of runners.

H. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
   1. Install in bed of acoustical sealant.
   2. Use longest practical lengths.
   3. Overlap and rivet corners.

3.03 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Lay directional patterned units in basket weave pattern, unless otherwise indicated or directed.

D. Fit border trim neatly against abutting surfaces.

E. Install units after above-ceiling work is complete.

F. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

G. Cutting Acoustical Units:
   1. Cut to fit irregular grid and perimeter edge trim.
   2. Make field cut edges of same profile as factory edges; finish cut edges to match factory finished edges if cut edge is exposed to view.

H. Install hold-down clips on panels within 20 ft of an exterior door.

3.04 TOLERANCES

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

SECTION 09 6513

RESILIENT BASE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Resilient wall base.

B. Flooring system accessories.

1.02 REFERENCE STANDARDS

A. ASTM F1861 - Standard Specification for Resilient Wall Base.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Store all materials off of the floor in an acclimatized, weather-tight space.

B. Deliver and store materials in manufacturer's original unopened containers, with brand names and production lot numbers clearly marked.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers:
   1. Manufacturers and products specified on Drawings.
   2. Substitutions: Not permitted.

2.02 RESILIENT BASE

A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set, styles as indicated or specified.
   1. Height: 4 inch.
   2. Thickness: 0.125 inch thick.
   3. Finish: Satin.
   4. Color: Color as selected from manufacturer's standards.

2.03 ACCESSORIES

A. Adhesives: Waterproof; types recommended by manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

3.02 PREPARATION

A. Clean substrate.

3.03 RESILIENT BASE

A. Fit joints tightly and make vertical. Install in longest lengths possible; maintain minimum dimension of 18 inches between joints.

B. Miter internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold.

C. Install base on solid backing. Bond tightly to wall and floor surfaces.

D. Scribe and fit to door frames and other interruptions.

3.04 CLEANING

A. Remove excess adhesive from base and wall surfaces without damage.

B. Clean in accordance with manufacturer's written instructions.

END OF SECTION

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SECTION 09 6813

TILE CARPETING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Carpet tile, fully adhered.

1.02 REFERENCE STANDARDS

A. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.

C. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.

D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 6000 - Product Requirements, for additional provisions.
   2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in installing carpet tile with minimum three years documented experience and approved by carpet tile manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver carpeting materials in original mill protective wrapping, with mill register numbers and tags attached.

B. Store inside, in well ventilated area, protected from weather, moisture, and soiling.

1.06 FIELD CONDITIONS

A. Stage materials in area of installation for minimum period of 24 hours prior to installation.

B. Maintain minimum 70 degrees F ambient temperature 24 hours prior to, during and 24 hours after installation.

C. Ventilate installation area during installation and for 72 hours after installation.

D. Do not commence with carpet installation until painting and finishing work is complete and ceilings and overhead work has been tested, approved, and completed.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers:
   1. Manufacturers and products specified on Drawings.
   2. Substitutions: Not permitted.

2.02 ACCESSORIES

A. Sub-Floor Filler: White premix latex; type recommended by flooring material manufacturer.

B. Non-Metallic Edge Strips: Extruded or molded heavy duty vinyl or rubber type; 1-1/2 inch wide, with minimum 2 inch wide anchorage flange; colors selected by Architect from manufacturer's standards.

C. Resilient Base: As specified in Section 09 6513.

D. Miscellaneous Materials: Provide other items recommended by carpet manufacturer and installer for the indicated conditions of carpet use, and as required for complete installation.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.

C. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for flooring installation by testing for moisture and pH.
   1. Test in accordance with ASTM F710.
   2. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

D. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.

C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

D. Vacuum clean substrate.

3.03 INSTALLATION

A. Starting installation constitutes acceptance of sub-floor conditions.

B. Install carpet tile in accordance with manufacturer's instructions.

C. Blend carpet from different cartons to ensure minimal variation in color match.

D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.

E. Lay carpet tile in indicated pattern, with pile direction alternating to next unit, set parallel to building lines unless otherwise indicated on Drawings.

F. Locate change of color or pattern between rooms under door centerline.

G. Fully adhere carpet tile to substrate.

H. Trim carpet tile neatly at walls and around interruptions.

I. Complete installation of edge strips, concealing exposed edges.

3.04 CLEANING

A. Remove excess adhesive without damage, from floor, base, and wall surfaces.

B. Clean and vacuum carpet surfaces.

END OF SECTION

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SECTION 09 7200

WALL COVERINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation and prime painting.

B. Wall covering.

1.02 REFERENCE STANDARDS

A. ASTM D1308 - Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on wall covering and adhesive.

C. Shop Drawings: Indicate wall elevations with seaming layout.

D. Samples: Submit two samples of wall covering, 12 X 12 inch in size illustrating color, finish, and texture.

E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

F. Maintenance Data: Submit data on cleaning, touch-up, and repair of covered surfaces.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 6000 - Product Requirements, for additional provisions.
   2. Extra Wall Covering Materials: 25 linear feet of each color and pattern of wall covering; store where directed.
   3. Package and label each roll by manufacturer, color and pattern, and destination room number.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the type of work specified in this Section with minimum five years of experience.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages or containers clearly labeled to identify manufacturer, brand name, quality and grade, and fire hazard classification.

B. Inspect roll materials at arrival on site, to verify acceptability.

C. Protect packaged adhesive from temperature cycling and cold temperatures.

D. Store materials in a well ventilated area protected from weather, moisture, soiling, and extreme temperatures and humidity. Maintain temperature is storage area above 40 degrees F.

E. Protect packaged adhesive from temperature cycling and cold temperatures.

F. Do not store roll goods on end.

1.06 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the adhesive or wall covering product manufacturer.

B. Maintain these conditions 24 hours before, during, and after installation of adhesive and wall covering.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers:
   1. Manufacturers and products specified on Drawings.
   2. Substitutions: Not permitted.

2.02 MATERIALS

A. Requirements for Wall Coverings:
   1. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/450, maximum, when tested in accordance with ASTM E84.
   2. Chemical and Stain Resistance: No visible staining or discoloration and no damage to surface texture when tested in accordance with ASTM D1308.

B. Adhesive: Water based type, zero (0) VOC content, spray application.
   1. Acceptable Manufacturer: Interlock Industries: 1500 Wall Covering Adhesive; www.spraylock.com.
      a. Substitutions: See Section 01 6000 - Product Requirements.

C. Substrate Filler: As recommended by adhesive and wall covering manufacturers; compatible with substrate.

D. Substrate Primer and Sealer: Free of volatile organic compounds (VOC); wall covering manufacturer's recommended type.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work, and conform to requirements of the wall covering manufacturer.

B. Measure moisture content of surfaces using an electronic moisture meter. Do not apply wall coverings if moisture content of substrate exceeds level recommended by wall covering manufacturer.

C. Verify flatness tolerance of surfaces does not vary more than 1/8 inch in 10 feet nor vary at a rate greater than 1/16 inch/ft.

3.02 PREPARATION

A. Fill cracks in substrate and smooth irregularities with filler; sand smooth.

B. Wash impervious surfaces with tetra-sodium phosphate, rinse and neutralize; wipe dry.

C. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

D. Surfaces: Correct defects and clean surfaces that affect work of this Section. Remove existing coatings that exhibit loose surface defects.

E. Marks: Seal with shellac those that may bleed through surface finishes.

F. Apply one coat of primer sealer to substrate surfaces. Allow to dry. Lightly sand smooth.

G. Vacuum clean surfaces free of loose particles.

3.03 INSTALLATION

A. Apply adhesive and wall covering in accordance with manufacturer's instructions.

B. Use wall covering in roll number sequence.

C. Razor trim edges. Do not razor cut on gypsum board surfaces.

D. Apply wall covering smooth, without wrinkles, gaps or overlaps. Eliminate air pockets and ensure full bond to substrate surface. Butt edges tightly.

E. Horizontal seams are not acceptable.

F. Do not seam within 2 inches of internal corners or within 6 inches of external corners.

G. Install wall covering before installation of bases and items attached to or spaced slightly from wall surface.

H. Do not install wall covering more than 1/4 inch below top of resilient base.

I. Cover spaces above and below windows, above doors, in pattern sequence from roll.

J. Remove excess adhesive while wet from seam before proceeding to next wall covering sheet. Wipe clean with dry cloth.

3.04 CLEANING

A. Clean wall coverings of excess adhesive, dust, dirt, and other contaminants.

B. Reinstall wall plates and accessories removed prior to work of this Section.

3.05 PROTECTION

A. Do not permit construction activities at or near finished wall covering areas.

END OF SECTION

SECTION 09 8412

ACOUSTICAL ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wall panels.

1.02 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
   4. Independent testing agency test reports.

C. Selection Samples: For each product specified, two complete sets of color samples representing manufacturer's full range of available colors and patterns.

D. Verification Samples: For each product specified, two samples, minimum size 6 inches square, representing actual product, color, and patterns.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Acceptable to the manufacturer of the acoustical products being installed.

B. Basis of Design: Specifications are based on acoustical accessory types by specified basis of design manufacturer. Acoustical accessory types manufactured by other acceptable manufacturers are permitted, subject to compliance with specified requirements; and provided that deviations in design, weight, profile, and performance are minor, and do not detract substantially from the indicated design intent.
   1. Comply with requirements specified in Section 01 4000 and Section 01 6000.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Protect acoustical products from moisture during shipment, storage, and handling.

B. Store products in manufacturer's unopened packaging until ready for installation.
   1. Store materials flat, in dry, well-ventilated space.
   2. Do not stand panels on end.
   3. Protect edges from damage.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.06 FIELD CONDITIONS

A. Do not begin installation of acoustical products until building has been enclosed and environmental conditions approximate those that will prevail when building is occupied.

B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design Manufacturers:
   1. As specified in this Section for each product.
   2. Substitutions: See Section 01 6000 - Product Requirements.

B. Provide all acoustical products specified herein by a single manufacturer.

2.02 ACOUSTICAL ACCESSORIES - GENERAL

A. Flame Spread Rating: Provide all components with Class A flame spread rating when tested in accordance with ASTM E84, unless otherwise specified.

2.03 ACOUSTICAL WALL PANELS

A. Wrapped Fiberglass Panels: Core of 6 to 7 pcf single fiberglass with chemically hardened edges, seamless finish material wrapped and bonded to back side of panels.
   1. Thickness: 1 inch.
   2. Size: As indicated on Drawings.
   3. Finish Material: Manufacturer's standard polyester fabric.
   4. Edges: Square.
   5. Corners: Square.
   6. Mounting: Mechanical clips.
   7. Acceptable Products: Conwed Designscape I Wall Technology; Respond A-100 Series Acoustical Panels: www.walltechnology.com.
      a. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Install acoustical units in accordance with manufacturer's instructions.

3.04 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 09 9113

EXTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

1.02 REFERENCE STANDARDS

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of products to be used, with the following information for each:
   1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
   2. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
   3. Manufacturer's installation instructions.

C. Samples: Submit two painted samples, illustrating selected colors and textures for each color and system selected with specified coats cascaded. Submit on aluminum sheet, 8 x 10 inch in size.

D. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 6000 - Product Requirements, for additional provisions.
   2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
   3. Label each container with color in addition to the manufacturer's label.

1.04 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum three years experience.

B. Basis of Design: Specifications are based on paint types and systems by specified basis of design manufacturer. Paint types and systems manufactured by other acceptable manufacturers are permitted, subject to compliance with specified requirements; and provided that deviations in formulation, compatibility, and performance are minor, and do not detract substantially from the indicated design intent.
   1. Comply with requirements specified in Section 01 4000 and Section 01 6000.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.06 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.

D. Minimum Application Temperatures for Latex Paints: 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

B. Acceptable Manufacturers:
1. Basis of Design Manufacturer: Sherwin-Williams Company: www.sherwin-williams.com.
2. Benjamin Moore & Co.: www.benjaminmoore.com.
3. Comex Group; Kwal Paint: www.thecomexgroup.com.
4. Diamond Vogel Paints: www.diamondvogel.com.
5. PPG Paints: www.ppgpaints.com.
6. Substitutions: See Section 01 6000 - Product Requirements.

C. Acceptable Manufacturers - Primers and Sealers: Same manufacturer as top coats.

2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
3. Supply each paint material in quantity required to complete entire project's work from a single production run.
4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

C. Colors: As scheduled on Drawings.

2.03 PAINT SYSTEMS

A. Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including existing cement plaster.
1. Two top coats and one coat primer.
2. Top Coat(s): Exterior Latex.
   a. Acceptable Products:
      1) Sherwin Williams Sherlastic Elastomeric Coating, A5 Series; 6 mils dry film thickness per coat.
      2) Substitutions: Section 01 6000 - Product Requirements.
3. Top Coat Sheen:
   a. Semi-Gloss: MPI gloss level 5; use this sheen at all locations unless otherwise indicated or specified.
4. Other Primers: As recommended by top coat manufacturer for specific substrate.

2.04 ACCESSORY MATERIALS

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

C. Test shop-applied primer for compatibility with subsequent cover materials.

D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Exterior Plaster and Stucco: 12 percent.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

F. Exterior Plaster: Fill hairline cracks, small holes, and imperfections with exterior patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

3.03 APPLICATION

A. Apply products in accordance with manufacturer's written instructions.

B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

C. Apply each coat to uniform appearance.

D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

E. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

SECTION 09 9123

INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints, stains, and transparent finishes.

1.02 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this Section.

B. Gloss Ratings: ASTM D523; on 85 and 60 degree gloss meters:
1. Flat: 0 to 15 (85 degree gloss meter).
2. Eggshell: 5 to 20 (60 degree gloss meter).
3. Satin: 15 to 35 (60 degree gloss meter).
4. Semi-Gloss: 30 to 65 (60 degree gloss meter).
5. Gloss (High): 65 and Greater (60 degree gloss meter).

1.03 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.

B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications.

C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials.

D. SSPC-SP 1 - Solvent Cleaning.

E. SSPC-SP 6 - Commercial Blast Cleaning; Society for Protective Coatings.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of products to be used, with the following information for each:
1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
2. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
3. Manufacturer's installation instructions.

C. Samples: Submit two painted samples, illustrating selected colors for each color and system selected with specified coats cascaded. Submit on tempered hardboard, 8 x 10 inch in size.

D. Certification: By manufacturer that paints and finishes comply with VOC limits specified.

E. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. See Section 01 6000 - Product Requirements, for additional provisions.
2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
3. Label each container with color in addition to the manufacturer's label.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum three years experience.

B. Basis of Design: Specifications are based on paint types and systems by specified basis of design manufacturer. Paint types and systems manufactured by other acceptable manufacturers are permitted, subject to compliance with specified requirements; and provided that deviations in formulation, compatibility, and performance are minor, and do not detract substantially from the indicated design intent.
   1. Comply with requirements specified in Section 01 4000 and Section 01 6000.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply materials when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.

D. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

B. Acceptable Manufacturers:
   1. Basis of Design Manufacturer: Sherwin-Williams Company: www.sherwin-williams.com.
   2. Benjamin Moore & Co: www.benjaminmoore.com.
   3. Comex Group; Kwal Paint: www.thecomexgroup.com.
   4. Diamond Vogel Paints: www.diamondvogel.com.
   5. PPG Paints: www.ppgpaints.com.
   6. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
   1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
   3. Supply each paint material in quantity required to complete entire project's work from a single production run.
   4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Volatile Organic Compound (VOC) Content:
   1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
      a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.

2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

D. Colors: As scheduled on Drawings.

2.03 PAINT SYSTEMS

A. Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board and shop primed steel.
   1. Two top coats and one coat primer.
   2. Top Coat(s): Institutional Low Odor/VOC Interior Latex.
      a. Acceptable Products:
         1) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Flat.
         2) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Low Sheen. (MPI #144)
         3) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Semi-Gloss.
         4) Substitutions: Section 01 6000 - Product Requirements.
   3. Top Coat Sheen:
      a. Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces.
      b. Eggshell: MPI gloss level 3; use this sheen at all locations unless otherwise indicated or specified.
      c. Semi-Gloss: MPI gloss level 5; use this sheen at hollow metal doors and frames, metal fabrications, and other scheduled locations.
   4. Primer: As recommended by top coat manufacturer for specific substrate.

B. Transparent Finish on Wood.
   1. Applications: Exposed wood timbers and other wood items not shop finished.
   2. 2 top coats over stain.
   3. Stain: Semi-Transparent Stain for Wood.
      a. Acceptable Products:
         1) Sherwin-Williams Wood Classics 250 VOC Oil Stain; A49 Series. (MPI #90)
         2) Substitutions: Section 01 6000 - Product Requirements.
   4. Top Coat(s): Polyurethane Varnish, Oil Modified.
      a. Acceptable Products:
         1) Sherwin-Williams Wood Classics Polyurethane Varnish, Satin. (MPI #57)
         2) Substitutions: Section 01 6000 - Product Requirements.

2.04 ACCESSORY MATERIALS

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin application of paints and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

D. Test shop-applied primer for compatibility with subsequent cover materials.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Gypsum Wallboard: 12 percent.
   2. Interior Wood: 6 to 8 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

E. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

F. Ferrous Metal:
   1. Solvent clean according to SSPC-SP1.
   2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
   3. Remove rust, loose mill scale, and other foreign substances using using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

G. Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.

3.03 APPLICATION

A. Apply products in accordance with manufacturer's written instructions.

B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

D. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.

E. Sand wood and metal surfaces lightly between coats to achieve required finish.

F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

G. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.

H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

SECTION 10 2226.33

FOLDING PANEL PARTITIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Folding panel partitions.

B. Self-supporting truss assembly.

C. Ceiling track, ceiling guards, and operating hardware.

1.02 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

C. ASTM E413 - Classification for Rating Sound Insulation.

D. ASTM E557 - Standard Guide for Architectural Design and Installation Practices for Sound Isolation between Spaces Separated by Operable Partitions.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on partition materials, operation, hardware and accessories, electric operating components, track switching components, and colors and finishes available.

C. Shop Drawings: Indicate opening sizes, track layout, details of track and required supports, static and dynamic loads, location and details of pass door and frame, adjacent construction and finish trim, and stacking depth.

D. Samples for Selection: Submit two samples of full manufacturer's color range for selection of colors.

E. Manufacturer's Instructions: Indicate special procedures.

F. Certificates: Certify that partition system meets or exceeds specified acoustic requirements.

G. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods. Describe cleaning materials detrimental to finish surfaces and hardware finish.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified this Section with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of this Section with minimum five years of documented experience.

C. Basis of Design: Specifications are based on partition systems and model numbers by the specified basis of design manufacturer. Partition systems manufactured by other acceptable manufacturers are permitted, subject to compliance with all specified performance requirements; and provided that deviations in dimensions, sizes, style, and finish are minor, and do not detract substantially from the indicated design intent.
   1. Comply with requirements specified in Section 01 4000 and Section 01 6000.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Protectively package and sequence panels in order for installation. Clearly mark packages and panels with numbering system used in shop drawings. Do not use permanent markings on panels.

1.06 FIELD MEASUREMENTS

A. Verify partition openings and storage arrangements by field measurements before fabrication, and indicate measurements on shop drawings.

B. Where field dimensions cannot be made without delaying the work, establish required opening and storage dimensions as instructed by the manufacturer and maintain those dimensions for actual installation of partitions.

1.07 MAINTENANCE MATERIALS

A. Furnish extra panel finish materials, matching installed materials, in quantity to cover both sides of two typical panels when installed.

B. Package maintenance materials with protective covering for storage, .identified with descriptive labels.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design Manufacturer:
   1. Hufcor, Inc.: www.hufcor.com.
      a. Partition Model: 632.
      b. Support Truss Assembly: Series U901 Unispan.
   2. Substitutions: See Section 01 6000 - Product Requirements.

B. Other Acceptable Manufacturers:
   1. Modernfold, a DORMA Group Company: www.modernfold.com.
   2. Panelfold, Inc.: www.panelfold.com.
   3. Substitutions: See Section 01 6000 - Product Requirements.

2.02 COMPONENTS

A. Operable Panel Partition: Center opening; paired panels; side stacking; manually operated.
   1. Panel Finish: Fabric.
   2. Noise Isolation Class (NIC): ASTM E413, 40, minimum.
   3. Sound Transmission Class (STC): 51, minimum, calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90, on panel size of 100 sq ft.
   4. Surface Burning Characteristics of Panel Finish: Flame spread/Smoke developed index of 25/450, maximum, when tested in accordance with ASTM E84.
   5. Installed partition system track capable of supporting imposed loads, with maximum deflection of 1/360 of span.

B. Panel Construction:
   1. Panel Substrate Facing: Steel sheet, manufacturer's specified thickness for indicated applications and configurations, but not less than 0.048 inch thick.
   2. Core: Solid wood construction utilizing manufacturer's standard fabrication methods.

C. Core: 16 gage formed sheet steel frame top, bottom, jambs, and intermediates; welded construction, internally reinforced at suspension points, with acoustical insulation fill.
   1. Thickness With Finish: 3 inches, nominal
   2. Factory applied surface finish.

D. Supporting Truss: Manufacturer's standard factory-fabricated steel and aluminum truss assembly; sized and structured for indicated service conditions.

E. Suspension Tracks: Formed steel or extruded aluminum with adjustable steel hanger rods for overhead support; sizes, thickness, and profile determined by manufacturer, designed to support partition loads. Limit track deflection to 0.10 inch between bracket supports. Provide a continuous system of track sections and accessories to accommodate configurations and layouts indicated for partition operation and storage.
   1. Panel Guides: Aluminum; finished with manufacturer’s standard factory-applied, decorative protective finish.
   2. Head Closure Trim: As required for acoustical performance; finished with manufacturer’s standard factory-applied, decorative protective finish.

3. Guide Rails: Aluminum guide rail assemblies on paired panel runs where indicated on Drawings to prevent door panels from impacting obstructions.

F. Carriers: Ball bearing, steel wheels on trolley carrier, sized to carry imposed loads, with treaded pendant bolt for vertical adjustment.
1. Multi-directional Carriers: Capable of negotiating 90-degree, L, T, and X intersections without track switches.

G. Track Intersections, Switches, and Accessories: Steel or aluminum as required for type of operation, storage, track configuration, and layouts indicated; compatible with specified partition system; finished with manufacturer's standard factory-applied, decorative protective finish.

H. Hinges: Manufacturer's standard continuous piano type, minimum 18 gage stainless steel.

I. Hardware: Manufacturer's standard recessed pulls of cast steel, finished with manufacturer's standard factory-applied, decorative protective finish.

J. Acoustic Seals: Provide mechanical seals that produce operable panel partitions that comply with specified acoustical performance requirements, made from materials and to profiles that minimize sound leakage, and tight-fitting at contact surfaces. Seals to provide continuous seal between adjacent panels, and between operable panel partition perimeter and adjacent surfaces when partition is fully extended, closed, and in place.
1. Vertical Seals: Deep-nesting, interlocking astragals mounted on each edge of panel, with continuous acoustical seal.
2. Horizontal Top Seals: Extruded PVC or PVC-faced, mechanically retractable type, exerting a uniform constant pressure on track when extended.
3. Horizontal Bottom Seals: PVC-faced, constant force contact seal exerting uniform constant pressure on floor when extended, ensuring horizontal and vertical sealing, and resisting panel movement; extension and retraction by operating handle or built-in operating mechanism automatically by movement of partition with operating range not less than 1.5 inch clearance between retracted seal and floor finish.

K. Fabric:
1. Color: As scheduled on Drawings, with matching trim color.
2. Tackable base.
3. Substitutions: Not Permitted.

L. Accessories: White enameled ceiling closure; aluminum jamb and head molding, fittings and attachments, and intermediate meeting posts.

M. Acoustic Sealant: Partition manufacturer's standard type .

2.03 PARTITION FABRICATION

A. Panel Construction: Provide top reinforcement as required to support panel from suspension components and provide reinforcement for hardware attachment. Fabricate panels with tight hairline joints and concealed fasteners. Fabricate panels so that finished in-place partition is rigid, level, plumb, aligned, with uniform appearance, free of warp, bow, twist, deformation, and surface irregularities.

B. Dimensions: Fabricate operable panel partitions to form an assembled system of dimensions indicated on Drawings, and verified by field dimensions.

C. Panel Edges: Protective aluminum perimeter-edge trim concealing edges of panel and finish facing.

D. Trim Finish: Manufacturer's standard aluminum trim; clear anodized.

E. Hardware: Manufacturer's standard as required to operate panel partitions and accessories, with protective finish.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify track supports are laterally braced and will permit track to be level within 1/4 inch of required position and parallel to the floor surface.

C. Verify floor flatness of 1/8 inch in 10 feet, non-cumulative.

D. Verify wall plumbness of 1/8 inch in 10 feet, non-cumulative.

3.02 INSTALLATION

A. Install partition in accordance with manufacturer's instructions and ASTM E557.

B. Fit and align partition assembly and pocket doors level and plumb.

C. Lubricate moving components.

D. Install acoustic sealant to achieve required acoustic performance.

3.03 ADJUSTING

A. Adjust partition assembly to provide smooth operation from stacked to full open position. Do not over-compress acoustic seals.

B. Visually inspect partition in full extended position for light leaks to identify a potential acoustical leak.

C. Adjust partition assembly to achieve lightproof seal.

3.04 CLEANING

A. Clean finish surfaces and partition accessories.

3.05 CLOSEOUT ACTIVITIES

A. Demonstrate operation of partition and identify potential operational problems.

END OF SECTION

SECTION 10 2601

MANUFACTURED WALL PROTECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wall protection.

1.02 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Indicate features and installation requirements.

C. Samples: Submit two sets of selection samples of wall protection sheet, 3 x 3 inch size, illustrating surface texture, configuration, available colors, and finish.

D. Manufacturer's Instructions: Indicate special procedures, perimeter conditions requiring special attention, and installation instructions.

PART 2 PRODUCTS

2.01 COMPONENTS

A. Wall Protection Sheet - Surface Mounted:
   1. Standard Vinyl Material: High impact vinyl, color as scheduled on Drawings.
   2. Surface Burning Characteristics: Provide assemblies with flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
   3. Sizes: As indicated on Drawings.
   4. Thickness: Minimum 0.040 inch.
   5. Acceptable Product:
      a. Construction Specialties, Inc.; Acrovyn 4000: www.c-sgroup.com.
      b. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install wall protection sheets in accordance with manufacturer's instructions, level and plumb, secured rigidly in position with adhesive.

3.02 TOLERANCES

A. Maximum Variation From Required Height: 1/4 inch.

END OF SECTION

SECTION 12 2400

WINDOW SHADES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Window shades and accessories.

B. Electric motor operators.

C. Motor controls.

1.02 REFERENCE STANDARDS

A. ASTM D4674 - Standard Practice for Accelerated Testing for Color Stability of Plastics Exposed to Indoor Office Environments.

B. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

C. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.

D. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Where motorized shades are to be controlled by control systems provided under other Sections, coordinate the work with other trades to provide compatible products.
   2. Coordinate the work with other trades to provide rough-in of electrical wiring as required for installation of hardwired motorized shades.
   3. Coordinate with window installation and placement of concealed blocking to support shades.

B. Preinstallation Meeting: Convene one week prior to commencing work related to products of this Section; require attendance of all affected installers.

C. Sequencing:
   1. Do not fabricate shades until field dimensions for each opening have been taken.
   2. Do not install shades until final surface finishes and painting are complete.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's standard catalog pages and data sheets including materials, finishes, fabrication details, dimensions, profiles, mounting requirements, and accessories.
   1. Motorized Shades: Include power requirements and standard wiring diagrams.

C. Shop Drawings: Include shade schedule indicating size, location and keys to details.
   1. Motorized Shades: Provide schematic system riser diagram indicating component interconnections. Include requirements for interface with other systems.

D. Certificates: Manufacturer's documentation that line voltage components are UL listed or UL recognized.

E. Selection Samples: Include fabric samples in full range of available colors and patterns.
   1. Motorized Shades: Include finish selections for controls.

F. Manufacturer's Instructions: Include instructions for storage, handling, protection, examination, preparation, and installation of product.

G. Project Record Documents: Record actual locations of control systems and show interconnecting wiring.

H. Operation and Maintenance Data: List of all components with part numbers, sources of supply, and operation and maintenance instructions; include copy of shop drawings.

I. Maintenance contracts.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of this type with minimum three years of experience.

B. Basis of Design: Specifications are based on shade systems by specified basis of design manufacturer and product(s). Shade systems manufactured by other acceptable manufacturers are permitted, subject to compliance with specified requirements; and provided that deviations in design, weight, and profile are minor, and do not detract substantially from the indicated design intent.
   1. Comply with requirements specified in Section 01 4000 and Section 01 6000.

1.06 MOCK-UP

A. Comply with general mock-up requirements specified in Section 01 4000.

B. Mock-Up: Provide full size mock-up of window shade complete with selected shade fabric including sample of seam when applicable.
   1. Obtain Architect's approval of light and privacy characteristics of fabric prior to fabrication.
   2. Full-sized mock-up may become part of the final installation.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver shades in manufacturer's unopened packaging, labeled to identify each shade for each opening.

B. Handle and store shades in accordance with manufacturer's recommendations.

1.08 FIELD CONDITIONS

A. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.09 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide manufacturer's warranty from Date of Substantial Completion, covering the following:
   1. Shade Hardware: 5 years.
   2. Electric Motors: 2 years.
   3. Electronic Control Equipment: 5 years.
   4. Fabric: 10 years.
   5. Aluminum and Steel Coatings: 10 years.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design Manufacturer - Roller Shade Assemblies:
   1. Insolroll Window Shading Systems: www.insolroll.com.
      a. Model: Radiance Shade System; motorized and manual systems.
   2. Substitutions: See Section 01 6000 - Product Requirements.

B. Other Acceptable Manufacturers:
   1. Draper, Inc.: www.draperinc.com.
   2. Hunter Douglas: www.hunterdouglas.com.
   3. Lutron Electronics Co., Inc.: www.lutron.com.
   4. MechoShade Systems, Inc.: www.mechoshade.com.
   5. Nysan Solar Control, Inc., a division of Hunter Douglas: www.nysan.com.
   6. SWFcontract, a division of Springs Window Fashions, LLC.: www.swfcontract.com.
   7. Substitutions: See Section 01 6000 - Product Requirements.

C. Acceptable Manufacturers - Shade Fabric:
   1. Mermet Corporation: www.mermetusa.com.
   2. Phifer, Inc.: www.phifer.com.
   3. Substitutions: See Section 01 6000 - Product Requirements.

D. Source Limitations: Furnish products produced by a single manufacturer and obtained from a single supplier.

2.02 ROLLER SHADES

A. Roller Shades Assemblies: Fabric roller shades complete with mounting brackets, roller tubes, hembars, hardware and accessories; fully factory-assembled.
   1. Drop: Regular roll.
   2. Size: As indicated on Drawings.
   3. Complete Assembies: Listed to UL 325.

B. Fabric: Non-flammable, color-fast fiberglass fabric, impervious to heat and moisture, and able to retain its shape under normal operation; PVC-free; 100 percent recycled.
   1. Sheer Shades: Reduce glare yet still reveal considerable details to the outside; no privacy; Openness Factor 3 to 5 percent.
   2. Translucent Shades: Soften the light and reveal only shadow-like outlines to the outside; substantial privacy; Openness Factor less than 1 percent.
   3. Flammability: Pass NFPA 701 large and small tests.
   4. Fungal Resistance: No growth, tested to ASTM G21.
   5. Color: As specified on Drawings.

C. Roller Tube: As required for type of operation, extruded aluminum with end caps designed specifically for interior and exterior use locations.
   1. Dimensions: Manufacturer's standard, selected for suitability for installation conditions, span, and weight of shades.
   2. Fabric Attachment: Utilize double sided adhesive tape.
   3. Finish: Clear anodized.
   4. Ingress Protection Rating: At natatorium and other wet locations, provide roller tube assemblies with minimum IP44 rating according to International Electrotechnical Commission (IEC) rating requirements; protected from tools and small wires greater than 1 mm, and protected from water spray from any direction.

D. Hembars and Hembar Pockets: Wall thickness designed for weight requirements and adaptation to uneven surfaces, to maintain bottom of shade straight and flat.
   1. Style: Half Wrap fabric covered bottom bar, flat profile with closed ends.
   2. Finish: Anodized.
   3. Color: As selected from manufacturer's standard colors.

E. Motor Operation: Motor system housed inside roller tube, controlling shade movement via motor controls indicated; listed to UL 325.
   1. Audible Noise: Maximum 39 dBA measured 3 feet from the motor unit; no audible clicks when motor starts and stops.
   2. Motors: Size and configuration as recommended by manufacturer for the type, size, and arrangement of shades to be operated; integrated into shade operating components and concealed from view.
   3. Motor Type: Both AC and DC motors are acceptable; provide required transformers for DC motors.
   4. Coupling of Multiple Shades: Where possible, minimize number of motors by coupling adjacent shades.
   5. Control Compatibility: Fully compatible with the controls to be installed.

2.03 MOTOR CONTROLS

A. Motorized shades, unless otherwise indicated, to be controlled by wall-mounted controls, wireless (RF) handheld remote controls, infrared handheld remote controls, and automatic solar-tracking controls as specified below.

B. Control Requirements:
   1. Unless specifically indicated to be excluded, provide all required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, system programming, etc. as necessary for a complete operating system that provides the control intent indicated.
   2. Capable of controlling shade speed for tracking within plus or minus 0.125 inch throughout entire travel.
   3. Capable of stopping within accuracy of 0.125 inch at any point between open and close limits.

4. Capable of assigning shades to groups and subgroups without rewiring.
5. Capable of storing up to 250 programmable stop points, including open, close, and any other position.
6. Provide 10 year power failure memory for preset stops, open and close limits, shade grouping and subgrouping and system configuration.
7. Capable of synchronizing multiple units of the same size to start, stop and move in unison.
8. Provide all components and connections necessary to interface with other systems as indicated.

C. Wall-Mounted Controls: UV stabilized visible parts meeting ASTM D4674; furnished with backlit buttons; provided by shade manufacturer.
1. Control Functions:
a. Open: Automatically open controlled shade(s) to fully open position when button is pressed.
b. Close: Automatically close controlled shade(s) to fully closed position when button is pressed.
c. Raise: Raise controlled shade(s) only while button is pressed.
d. Lower: Lower controlled shade(s) only while button is pressed.
e. Stop shade(s) in motion by tap on any button.
f. Presets: Provide button(s) as indicated for selection of programmable scenes.
g. Multiple Shade Groups: Provide individual controls for each shade group as indicated.
2. Finish: To be selected by Architect.
3. Button Engraving: Manufacturer's standard engraving, unless otherwise indicated.

D. Wireless (Radio Frequency) Handheld Remote Control: Battery-powered; provided by shade manufacturer.
1. Wireless Range: 30 feet.
2. Control Functions:
a. Open: Automatically open controlled shade(s) to fully open position when button is pressed.
b. Close: Automatically close controlled shade(s) to fully closed position when button is pressed.
c. Raise: Raise controlled shade(s) only while button is pressed.
d. Lower: Lower controlled shade(s) only while button is pressed.
e. Preset: Provide button for selection of programmable scene.
3. Finish: To be selected by Architect.

2.04 ACCESSORIES

A. Fascias: Size as required to conceal shade mounting.
1. Style A: Surface mounted as selected by Architect from shade manufacturer’s full selection.
2. Style B: Special or custom trim pocket with bottom edge that functions as ceiling trim aligned with ceiling plane as detailed on Drawings.
3. Material and Color: To match shade.

B. Brackets and Mounting Hardware: As recommended by manufacturer for mounting configuration and span indicated.

C. Fasteners: Non-corrosive, and as recommended by shade manufacturer.

2.05 FABRICATION

A. Field measure finished openings prior to ordering or fabrication.

B. Fabricate shades to fit openings within specified tolerances.
1. Vertical Dimensions: Fill openings from head to sill with 1/2 inch space between bottom bar and window stool.
2. Horizontal Dimensions - Outside Mounting: Cover window frames, trim, and casings completely.

C. Dimensional Tolerances: As recommended in writing by manufacturer.

D. At openings requiring continuous multiple shade units with separate rollers, locate roller joints at window mullion centers; butt rollers end-to-end.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine finished openings for deficiencies that may preclude satisfactory installation.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Start of installation shall be considered acceptance of substrates.

3.02 PREPARATION

A. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under the project conditions.

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved shop drawings, using mounting devices as indicated.

B. Installation Tolerances:
   1. Inside Mounting: Maximum space between shade and jamb when closed of 1/16 inch.
   2. Maximum Offset From Level: 1/16 inch.

C. Replace shades that exceed specified dimensional tolerances at no extra cost to Owner.

D. Adjust level, projection and shade centering from mounting bracket. Verify there is no telescoping of shade fabric. Ensure smooth shade operation.

3.04 SYSTEM STARTUP

A. Motorized Shade System: Provide services of a manufacturer's authorized representative to perform system startup.

3.05 CLEANING

A. Clean soiled shades and exposed components as recommended by manufacturer.

B. Replace shades that cannot be cleaned to "like new" condition.

3.06 CLOSEOUT ACTIVITIES

A. Demonstration: Demonstrate operation and maintenance of window shade system to Owner's personnel.

B. Training: Train Owner's personnel on operation and maintenance of system.
   1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
   2. Provide minimum of two hours training by manufacturer's authorized personnel at location designated by the Owner.

3.07 PROTECTION

A. Protect installed products from subsequent construction operations.

3.08 MAINTENANCE

A. Provide to Owner, a proposal as an alternate to the base bid, a separate renewable maintenance contract for the service and maintenance of a motorized shade system for one year from date of Substantial Completion. Include a complete description of preventive maintenance, systematic examination, adjustment, parts and labor, cleaning, and testing, with a detailed schedule.

END OF SECTION

SECTION 12 3600

COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Countertops for architectural wood casework.

1.02 REFERENCE STANDARDS

A. ANSI A208.2 - American National Standard for Medium Density Fiberboard for Interior Use.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards.

C. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; International Surface Fabricators Association.

D. NEMA LD 3 - High-Pressure Decorative Laminates.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate sizing and configuration of countertops with associated casework and adjacent construction.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Specimen warranty.

C. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other Sections.

D. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.

E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

F. Installation Instructions: Manufacturer's installation instructions and recommendations.

G. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.05 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in the fabrication of specified countertops with minimum three years of documented experience.

B. Installer Qualifications: Fabricator.

1.06 MOCK-UP

A. Comply with general mock-up requirements specified in Section 01 4000.

B. Mock-Up: Full size mock-up of each specified counter top type, in conjunction with complete base unit.
   1. Locate where directed.
   2. Mock up may remain as part of the work.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.08 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 COUNTERTOPS

A. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
   1. Flat Sheet Thickness: 1/4 inch, minimum.
   2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
   3. Acceptable Manufacturers:
      a. Dupont: www.corian.com.
      b. Substitutions: Not permitted.
   4. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
   5. Color and Pattern: As scheduled on Drawings.
   6. Edge Treatment: As indicated on Drawings.
   7. Fabricate in accordance with AWI/AWMAC/WI (AWS), Section 11 - Countertops, Custom Grade.

2.02 ACCESSORY MATERIALS

A. Medium Density Fiberboard for Supporting Substrate: ANSI A208.2.

B. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

C. Joint Sealant: Mildew-resistant silicone sealant, white color.

2.03 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
   1. Join lengths of tops using best method recommended by manufacturer.
   2. Fabricate to overhang fronts and ends of cabinets 1-1/2 inch except where top butts against cabinet or wall.
   3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
   1. Secure to walls with contact surfaces set in waterproof adhesive.
   2. Height: 4 inches, unless otherwise indicated.

C. Solid Surfacing: Fabricate tops up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

B. Seal joint between back/end splashes and vertical surfaces.

3.04 TOLERANCES

A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.

B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.

C. Field Joints: 1/8 inch wide, maximum.

3.05 CLEANING

A. Clean countertops surfaces thoroughly.

3.06 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

SECTION 32 1313

CONCRETE PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete patio slabs.

1.02 REFERENCE STANDARDS

A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.

B. ACI 301 - Specifications for Structural Concrete.

C. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete.

D. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.

E. ASTM C33/C33M - Standard Specification for Concrete Aggregates.

F. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.

G. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.

H. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.

I. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete.

J. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.

K. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.

L. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).

M. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on joint filler, admixtures, and curing compound.

C. Mix Designs: Submit proposed mix design for each class of concrete specified. Include proportions of ingredients, aggregate analysis, cement brand and type, slump, water/cement ratio, and strength test reports for 7 and 28 day strengths.
   1. Prepare in accordance with ACI 301.

PART 2 PRODUCTS

2.01 FORM MATERIALS

A. Form Materials: As specified in Section 03 3000; conform to ACI 301.

B. Joint Filler: Preformed; non-extruding bituminous type (ASTM D1751) or sponge rubber or cork (ASTM D1752).
   1. Thickness: 1/2 inch.

2.02 REINFORCEMENT

A. Steel Welded Wire Reinforcement: Plain type, ASTM A1064/A1064M; in flat sheets; unfinished.

2.03 CONCRETE MATERIALS

A. Obtain cementitious materials from same source throughout.

B. Fine and Coarse Mix Aggregates: ASTM C33/C33M.

C. Fly Ash: ASTM C618, Class C or F.

D. Water: Clean, and not detrimental to concrete.

E. Air-Entraining Admixtures: ASTM C260/C260M.

2.04 ACCESSORIES

A. Curing Compound: ASTM C309, Type 1 (clear or translucent), Class A.

B. Joint Sealer: Specified in Section 07 9200.

2.05 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
   1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.

C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.

D. Concrete Properties:
   1. Compressive strength, when tested in accordance with ASTM C39/C39M at 28 days; 4,000 psi.
   2. Cement Content: Minimum 6 sacks per cubic yard.
   3. Water-Cement Ratio: Maximum 45 percent by weight.
   4. Total Air Content: 5 to 7 percent, determined in accordance with ASTM C173/C173M.
   5. Maximum Slump: 5 inches.
   6. Maximum Aggregate Size: 1 inch.

2.06 MIXING

A. Transit Mixers: Comply with ASTM C94/C94M.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.

B. Verify gradients and elevations of base are correct.

3.02 FORMING

A. Place and secure forms to correct location, dimension, profile, and gradient.

B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.

C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.03 COLD AND HOT WEATHER CONCRETING

A. Follow recommendations of ACI 301 when concreting during hot or cold weather.

B. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

3.04 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R.

B. Do not place concrete when base surface is wet.

C. Ensure reinforcement, inserts, embedded parts, formed joints and similar items are not disturbed during concrete placement.

D. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.

E. Place concrete to pattern indicated.

3.05 JOINTS

A. Place 1/2 inch wide expansion joints at 20 foot intervals and to separate paving from vertical surfaces and other components and in pattern indicated.
   1. Form joints with joint filler extending from bottom of pavement to within 3/4 inch of finished surface.
   2. Secure to resist movement by wet concrete.

B. Provide sawn and tooled joints where indicated on Drawings.
   1. At spacing and layout indicated on Drawings.
   2. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing. Cut minimum 1/3 into depth of slab.

3.06 FINISHING

A. Plaza and Patio Area Paving: Light broom, direction as indicated, with troweled and radiused edge; 1/4 inch radius.

B. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

3.07 TOLERANCES

A. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.

B. Maximum Variation From True Position: 1/4 inch.

3.08 PROTECTION

A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.

B. Do not permit pedestrian traffic over pavement for 7 days minimum after finishing.

END OF SECTION

SECTION 32 1440

STONE PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Flagstone pavers.

B. Sand bed and sand joint filler.

1.02 MOCK-UP

A. Provide paver mock-up, 4 feet long by 4 feet wide; include setting bed, pavers, joints, and edging.
   1. Re-use existing pavers as specified.
   2. Locate where directed.
   3. Mock-up may not remain as part of the Work.

1.03 FIELD CONDITIONS

A. At end of working day or during rainy weather, cover work exposed to weather with waterproof coverings, securely anchored.

PART 2 PRODUCTS

2.01 PAVER MATERIALS

A. Pavers: Salvaged sandstone (flagstone) paver units.

2.02 SAND BED MATERIALS

A. Sand for Base: Clean washed bank sand containing maximum of 30 percent particle size of No. 10 (2 mm) sieve.

B. Sand for Joints: Clean washed fine sand of installers recommended sieve size.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate is level, smooth, capable of supporting pavers and imposed loads, and ready to receive work of this section.

B. Verify gradients and elevations of substrate are correct.

3.02 INSTALLATION - SAND SETTING BED

A. Spread sand evenly over prepared substrate to a maximum thickness of 1-1/2 inch.

B. Dampen and roller compact sand to level and even surface.

C. Screed and scarify top 1/2 inch of sand.

D. Place paver units in herringbone pattern, from straight reference edge.

E. Sprinkle sand over surface, sweep into joints and moisten. Recover with additional sand until firm joints are achieved. Remove excess sand.

F. Tamp and level paver units with mechanical vibrator until units are firmly bedded, level, and to correct elevation and gradients.

3.03 CLEANING

A. Broom clean paving surfaces. Dispose of excess sand.

3.04 PROTECTION

A. Do not permit traffic over unprotected paver surface.

B. Protect paver surface with sheets of plywood.

END OF SECTION

AE DESIGN

Integrated Lighting and Electrical Solutions

LONE TREE LIBRARY

11.23.2016
100% CD / Issue for Permit

AE DESIGN

Portfolio

DESCRIPTION

8-inch LED recessed narrow, medium, or wide beam downlight specially designed for LED technology. Two-stage reflector system produces smooth distribution with excellent light control and low aperture brightness. Offered with 1000-15,000 lumens with color temperatures of 2700K, 3000K, 3500K, 4000K available in 80 or 90 CRI.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Lower Shielding Reflector
Self-flanged, spun .060" thick aluminum lower reflector in combination with a lensed upper optical chamber provides superior lumen output with minimal source brightness. Available in all Portfolio Alzak® finishes.

Trim Retention
Lower reflector is retained with two torsion springs holding the flange tightly to the finished ceiling surface.

Plaster Frame / Collar
Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2".

Universal Mounting Bracket
Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

Junction Box
(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring.

Thermal
Forged aluminum heat sink conducts heat away from the LED module for improved performance and longer life.

LED
LED system contains a plurality of high brightness white LED's combined with a high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation. Rated for 50,000 hours at 70% lumen maintenance. Color variation within 3-step MacAdam ellipses. Flexible disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80 or 90 CRI.

Driver
Combination 0-10V/trailing edge driver provides flicker free dimming from 100% to 10%. Optional 1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture. 1000, 1500, 2000 lumen utilize one driver. 3000-10,000 utilize two drivers, 12,000-15,000 lumen utilizes three drivers.

Code Compliance
Thermally protected and cULus listed for protected wet locations. cCSAus certified. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/ RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Non-IC rated - Insulation must be kept 3" from top and sides of housing. RoHS Compliant. Photometric testing completed in accordance with IES LM 79 standards. LED life testing completed in accordance with LM 80 standards. 8000 lumen and above are marked spacing and must follow spacing requirements.

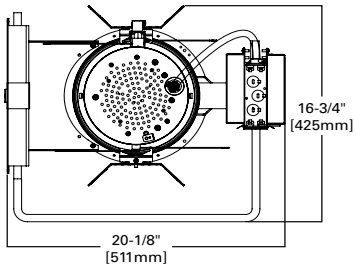
Warranty
5-year warranty.

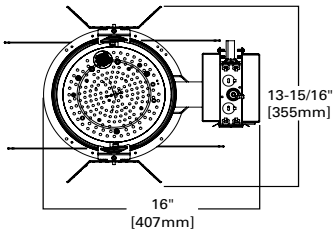
LD8A
ER8A
8L

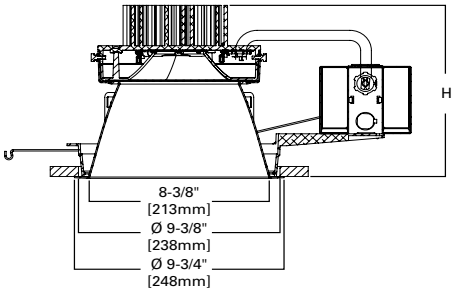
1,000-15,000 Lumen LED

8-Inch Narrow, Medium, or Wide
Downlight
New Construction

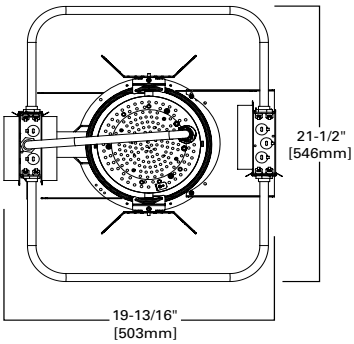
with Battery







12,000-15,000 Lumen



Distribution	Height
Narrow	9-1/16"
Medium	8-5/8"
Wide	7-7/8"

Showerlight

Refer to ENERGY STAR® Qualified Products List.

powered by fifthlight technology

EATON
Powering Business Worldwide

ADP130411
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AE DESIGN

PHILIPS

GARDCO

Wall Mount

LED wall sconce 121

Project:

Location:

Cat.No:

Type:

Qty:

Notes:

Philips Gardco LED wall sconce 121 offers distinction through its styling, powerful optical design, array of distributions, and impressive selection of control possiblilities. Designed to add an element of style to your application by pairing straight lines with rounded edges, the form of the 121 is timeless, yet contemporary, and will complement a wide assortment of architectural styles and designs, while delivering high light levels and functional distributions. 121 sconces are available in Type 2, 3, and 4 distributions, and provide output of up to 10,103 lumens. Energy saving control options help to increase energy savings and offer California Title 24 compliance. Emergency Battery Backup option available for path-of-egress and is integral to the luminaire.

Ordering guide

example: 121-32L-700-NW-G3-3-120-IMRI2-BZ

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Emergency	Voltage	Options: Controls	Options: Electrical	Options: Finish
121									
121 LED wall sconce	**16L** 16 LEDs (1 modules)	**530** 530mA **650** 650mA[1] **700** 700mA **1000** 1000mA **1200** 1200mA[2]	**CW-G3** Cool White 5700K, 70 CRI Generation 3 **NW-G3** Neutral White 4000K, 70 CRI Generation 3 **WW-G3** Warm White 3000K, 70 CRI Generation 3	**2** Type 2 **3** Type 3 **4** Type 4	**EBPC** Emergency Battery Pack Cold Weather[3,4] Leave blank to omit an emergency option	**UNV** 120-277V **HVU** 347-480V **120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V	**DD** 0-10V Dimming Driver[5] **DCC** Dual Circuit Control[6,7,8] **DynaDimmer:** Automatic Profile Dimming **CS50** Safety 50% Dimming[5,6] **CM50** Median 50% Dimming[5,6] **CE50** Economy 50% Dimming[5,6] **DA50** All Night 50% Dimming[5,6] **Photoelectric Systems** **PCB** Photocontrol Button[9,10,11] **Infrared Motion Response Systems** **IMRI2** Integral with #2 lens[3,5] **IMRI3** Integral with #3 lens[3,5] **Wireless Controls (luminaire mounted)** **LLC2** Module with #2 lens[5,6] **LLC3** Module with #3 lens[5,6]	**Fusing** **F1** Single (120, 277, 347VAC)[10] **F2** Double (208, 240, 480VAC)[10] **F3** Canadian Double Pull (208, 240, 480VAC)[10]	**Textured** **BK** Black **WH** White **BZ** Bronze **DGY** Dark Gray **MGY** Medium Gray **Customer specified** **RAL** Specify optional color or RAL (ex: OC-LGP or OC-RAL7024) **CC** Custom color (Must supply color chip for required factory quote)
	32L 32 LEDs (2 modules)	**530** 530mA **650** 650mA[1] **700** 700mA **1000** 1000mA							

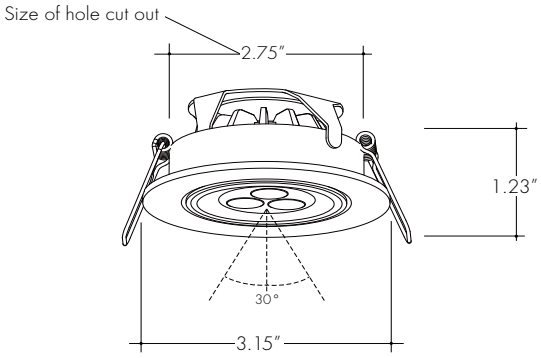
1. Only available with EBPC
2. Only available with 16 LEDs
3. Available in 120V or 277V only
4. EBPC available only in 530mA or 650mA
5. Not available with 1.2A drive current
6. Available in 120V thru 277V and UNV only.
7. DCC available only in 530mA with 32 LED
8. Not available with EBPC
9. Not available with DCC
10. Voltage must be specified
11. Not available in 480V

AE DESIGN

luminii

Cabin 3 | Swivel Recessed Puck Light

Powerful point source recessed LED puck lights swivel to direct the light where it is needed. Mounts in sheetrock, wood or other materials with friction spring clips. Anodized aluminum construction available with white or silver finish. Cut out is 2.75". Suitable for recessed mounting. Approved for closet/storage space installation per NEC 410.16(A)(3) and 410.16(C)(5).



Made in USA

TYPE IC

Intertek

dimmable

Finish options

Silver

White

Technical information

Power consumption: 3.80 W

Light output: 161 lum

Input current: 350 mA

Forward voltage (typical): 10.7 VDC

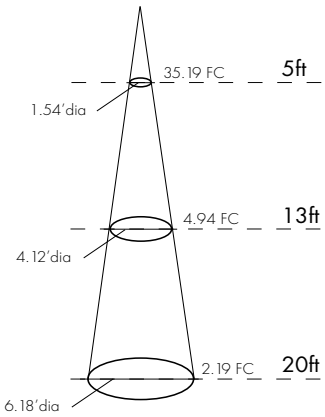
Color temperature: 3000 K

CRI: 85

Average life: 50,000 hours

Approvals: TYPE IC - conforms to UL STD 2108, certified to CSA STD C22.2 No. 9.0, approved for closet/storage space installation

17°beam spread

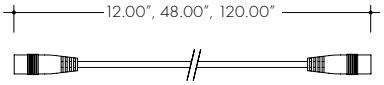


Ordering Code

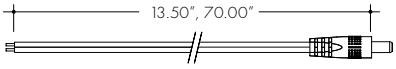
MODEL		CCT		BEAM		FINISH
CAB3	-	30K	-	17	-	SL
CAB3 - Cabin 3		30K - 3000 K		17 - 17°angle		SL - Silver WH - White

Accessories

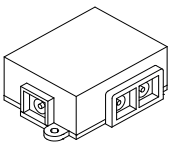
Extension cable 12", 48", 120"
Part # EC-12
Part # EC-48
Part # EC-120



Male quick connect
Part # LMC
Part # LMC-70
(includes terminal block)



Connecting Hub
Part # DC HUB



Female/male adapter
Part # FMA

L I N E - V O L T A G E P E N D A N T S / S U S P E N S I O N

Henrik Grande Pendant

DESCRIPTION
The Henrik Grande pendant light from Tech Lighting features a spun metal upper body that is hand-painted with rubberized enamel for a soft, matte finish which is then combined with a beautifully hand-polished, premium pressed glass shade for a unique contemporary closed bottom LED pendant light. Includes 120 volt, 75 watt medium base A21 lamp or G24Q-3 base 32w triple tube compact fluorescent lamp (electronic ballast included). LED version ships with one 120V, 19 watt A21 Philips LED lamp. Incandescent version dimmable with standard incandescent dimmer. LED version dimmable with an LED compatible dimmer. Consult lamp manufacturer for more information. Fixture provided with six feet of field-cuttable cable.

INSTALLATION
This product can mount to either a 4" square electrical box with round plaster ring or an octagonal electrical box (not included).

WEIGHT
7.56lb / 3.43kg ±

black

black brushed aluminum white

ORDERING INFORMATION

700 SYSTEM	HNKGP	COLOR	FINISH	LAMP
TD LINE-VOLTAGE PENDANTS/SUSPENSION		**B** BLACK	**B** BLACK	INCANDESCENT 120V
TT SINGLE-CIRCUIT T~TRAK		**A** BRUSHED ALUMINUM	**S** SATIN NICKEL	**-CF** COMPACT FLUORESCENT 120V
TT2 TWO-CIRCUIT T~TRAK		**W** WHITE	**W** WHITE	**-CF277** COMPACT FLUORESCENT 277V
				-LED827 A21 LED 80 CRI 2700K 120V
				-PSUNV COMPACT FLUORESCENT PROGRAMMED START 120V-277V

TD includes 4.5" Round Canopy.
Black Finish Only Available on TD.
CF277 and PSUNV Lamp Only Available on TD.

TECH LIGHTING

7400 Linder Avenue
Skokie, Illinois 60077
T 847.410.4400
F 847.410.4500

Tech Lighting, L.L.C.

700 ____ HNKGP ____ ____ ____

FIXTURE TYPE: _____

JOB NAME: _____

NOTES: _____

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Tech Lighting reserves the right to change specifications for product improvements without notification.

COOPER LIGHTING - SURE-LITES®

DESCRIPTION

LPX Series LED Exit is a polycarbonate unit suitable for general purpose applications. With the new advanced standard features and industry leading innovations, they are now the most universal, energy friendly, easiest to stock and install, and safest Exits in their class.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Electrical

- **General Features**
- Field selected red and green sign capability standard on all units (units shipped red, field convert to green with supplied parts).
- Dual Voltage Input 120/277 VAC, 60Hz
- **AC Only**
- Optional 2C (Two circuit, FTBR) available in 120/277 VAC in standard and emergency operation
- **Self Powered**
- Sure-Lites EZ Key patented external battery disconnect feature – prevents unnecessary battery drainage, saves on installation time
- Solid-state Voltage Limited Charger
- Brownout Circuit
- Low-Voltage Disconnect
- Test Switch/Power Indicator Light
- Standard 24 hour recharge time (max)
- Eagle Eye™ Self-Diagnostic feature available as option

Housing Construction

- All components are injection molded, color stable, high impact UL 94-5VA rated polycarbonate material
- White or black textured finish standard
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout to provide maximum strength
- Molded-in wireways facilitate internal wire routing and connections
- All components including battery and electronics are located inside the exit housing
- Snap-out or snap-in chevron directional indicators have full 3/4" stroke
- Knockout provided on housing for surface attachment
- Universal exits can be field configured as single face or double face
- Snap-fit canopy with captive mounting screws included with all exits
- Exit can be ceiling, wall, or end mounted
- Universal J-box mounting pattern

Lamp Data

- AC LED: Red and green LED lamps provide uniform diffused illumination
- DC: Red and green LED DC lamps (Brighter in emergency mode)

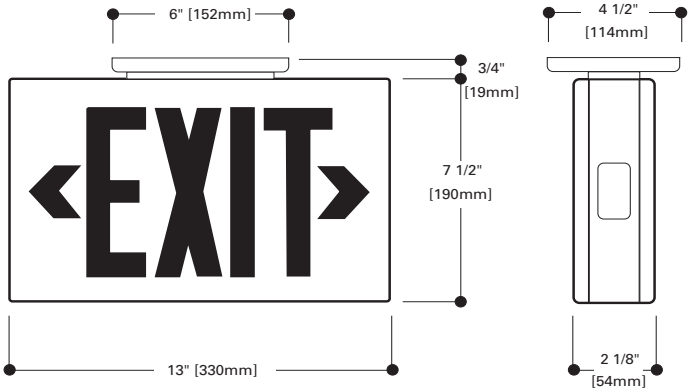
Code Compliance

- UL 924 Listed
- UL Damp Location (0-40° C)
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- Suitable for Floor Proximity Installation
- UL Listed for 2C (FTBR)
- Patent Numbers 5,735,498 and 5,678,336

Warranty

- Exit: 1-Year
- Battery: 15-year pro-rata

Eagle Eye Self Diagnostics



LPX SERIES

POLYCARBONATE EXIT
SURFACE MOUNT
LED LAMPS
EXIT LIGHTING

ENERGY DATA

Maximum power consumption under all charge conditions:

AC Only, 120V - Red
Amps: 0.07
Watts: 0.98
Power Factor: 0.12

AC Only, 120V - Green
Amps: 0.07
Watts: 1.02
Power Factor: 0.13

AC Only, 277V - Red
Amps: 0.07
Watts: 1.04
Power Factor: 0.06

AC Only, 277V - Green
Amps: 0.07
Watts: 1.12
Power Factor: 0.06

Self Powered, 120V - Red
Amps: 0.07
Watts: 0.98
Power Factor: 0.12

Self Powered, 120V - Green
Amps: 0.07
Watts: 1.00
Power Factor: 0.13

Self Powered, 277V - Red
Amps: 0.07
Watts: 1.03
Power Factor: 0.06

Self Powered, 277V - Green
Amps: 0.07
Watts: 1.09
Power Factor: 0.05

COOPER Lighting
www.cooperlighting.com

Specifications and dimensions subject to change without notice.
Consult your representative for additional options and finishes.

ADX100035 pc
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AE DESIGN

Sure-Lites

DESCRIPTION

The APEL is an UL 924 listed emergency light with a minimum of 90 minutes of run time. Key features include LED heads, a no maintenance Nickel Cadmium battery and a five year fixture warranty. The LED heads are fully adjustable to maximize design flexibility while the compact form factor optimizes aesthetics. The universal j-box mounting pattern and snap fit housing construction significantly reduce installation time.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Electrical
- Dual Voltage Input 120/277 VAC, 60 Hz
- Line-latching
- Brownout circuit
- Low Voltage Disconnect
- Overload/Short Circuit Protection
- Test Switch/Power connector facilitates installation
- 3.6V, .78W DC Long Lasting LED Heads

Housing Construction
- All components are injection-molded, color stable, high impact thermoplastic material
- Designer textured finish standard
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout to provide maximum strength
- Suitable for wall or ceiling mount applications
- Universal J-box mounting pattern
- Keyhole mounting slots
- Aesthetically designed with a thin profile

Battery
- Sealed Nickel Cadmium
- Maintenance-free, long-life
- Full recharge time: 24 hrs (max.)
- Polarized battery terminals

Code Compliance
- UL 924 Damp Location Listed
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- Operating temperature range 10C to 40C

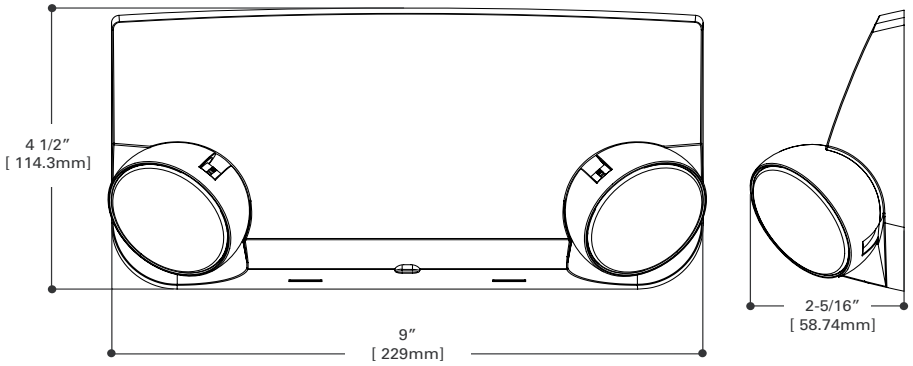
Warranty
- Five-year warranty

Head/Lamp Data
- Long Life LED Emergency Heads
- Two heads standard
- Fully adjustable
- High impact thermoplastic
- Matches housing finish

APEL SERIES

SEALED NICKEL CADMIUM BATTERY

EMERGENCY LIGHTING



TOTALLY PREDICTABLE RELIABILITY

ELECTRICAL RATINGS

Model	Rated Wattage DC Voltage	Rated Wattage 1 1/2 Hours
APEL	**3.6V**	**1.56**

Note: Each Long Life LED Emergency Head replaces a 5.4 Watt Incandescent lamp.

ORDERING INFORMATION

SAMPLE NUMBER: APEL

Family
APEL=All-Pro emergency light

ENERGY DATA

Model APEL
Input Power:
120V = .33W
277V = .47W
Input Current (Max)
120V = .06A
277V = .07A

EATON
Powering Business Worldwide

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EXHIBIT B

FEE SCHEDULE / CONTRACT PRICE

City of Lone Tree

Library Reuse Project

All Construction per Project Number 2016.027.01, 21 page Remodel plans dated 2016.11.23

and 145 page Project Manual dated November 23, 2016.

Contractor Name: Mark Young Construction, Inc.

Date: January 11, 2017

Primary Proposal		**Extended Price**
Construction	$	189,325
Casework	$	14,170
Flooring	$	43,710
Concrete	$	1,944
Sub-Total	**$**	**249,149**

Alternate Proposed Items		**Extended Price**
Alt 1- Concrete for Entire Patio	$	1,768
Alt 2- Motorized Shade XD	$	4,914
Alt 3- Viewing Window Sitting Room	$	642
Alt 4- Casework Upgrade	$	1,176
Alt 5- Fire Place Remodel	$	3,061
Alt 6- Add Acoustical Wall Material (Option Declined by Owner)	$	-
Alt 7- New Restroom Partitions	$	3,652
Alt 8- Replace Exterior Light (Option Declined by Owner)	$	-
Alt 9- Restroom Flooring	$	3,701
Sub Total	**$**	**18,914**
Primary and Selected Alternates Total	$	268,063
5% Performance Bond	$	13,403
Contractor Total	**$**	**281,466**

EXHIBIT C
INSURANCE REQUIREMENTS

Contractor shall maintain general liability insurance, at its expense, in an amount of at least One Million Dollars ($1,000,000.00) and insurance for protection from claims under workers' compensation acts, claims for damages because of bodily injury including personal injury, sickness or disease or death of any and all employees or of any person other than such employees, and from claims or damages because of injury to or destruction of property including loss of use resulting therefrom. The City and its respective managers, council members, officers, directors, partners and employees shall be named as additional insured.

CITY OF LONE TREE

STAFF REPORT

Project Summary

Date: January 17, 2017

Project Name: Proposed Amendments to the Lone Tree Municipal Code

Project Type / #: Municipal Code Update, RG16-71

Staff Contacts: Jennifer Drybread, Planning Manager
Lisa Albers, Capital Improvement Project Manager
Matt Archer, Chief Building Official
Kelly First, Community Development Director
John Cotten, Public Works Director

Meeting Type: Public Hearing, Second Reading

Summary of Request:

Approval to amend the Lone Tree Municipal Code including:

Chapter 11 - Streets, Sidewalks and Public Property
Chapter 15 – Public Works
Chapter 16 – Zoning
Chapter 17 – Subdivision
Chapter 18 – Building Regulations

Planning Commission Recommendation (applicable for Chapters 16 and 17 only):

Unanimous approval subject to a minor format change to Chapter 17, which has been addressed

Suggested Motion or Recommended Action:

I move to approve on Second Reading:

- **ORDINANCE 17-01, AN ORDINANCE AMENDING CHAPTER 11 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE AND AMEND THE DOUGLAS**

COUNTY ROADWAY AND DESIGN STANDARDS; AMEND THE BUILDING MATERIALS ARTICLE; ADD NEW ARTICLES REGARDING STREET AND PEDESTRIAN LIGHTING AND PUBLIC RIGHTS OF WAY; AND PROVIDE FOR PENALTIES

- **ORDINANCE 17-02, AN ORDINANCE AMENDING CHAPTER 15 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE THE 2017 FLOOD INSURANCE STUDY FOR DOUGLAS COUNTY AND ACCOMPANYING FLOOD INSURANCE RATE MAPS, DIGITAL FLOOD RATE MAPS AND FLOOD BOUNDARY FLOODWAY MAPS; AMEND STORMWATER DISCHARGE DEFINITION; ADD A NEW ARTICLE REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AND PROVIDE FOR PENALTIES**

- **ORDINANCE NO. 17-03, AN ORDINANCE AMENDING CHAPTER 16 OF THE MUNICIPAL CODE TO REPEAL ARTICLE XXXI REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AMEND USE AND STRUCTURE RESTRICTIONS NEAR AIRPORTS; ADD A PROVISION REGARDING RAIN BARRELS; AND AMEND AND UPDATE MISCELLANEOUS PROVISIONS**

- **ORDINANCE NO. 17-04, AN ORDINANCE AMENDING CHAPTER 17 OF THE MUNICIPAL CODE TO AMEND AND UPDATE MISCELLANEOUS PROVISIONS**

- **ORDINANCE NO. 17-05, AN ORDINANCE AMENDING CHAPTER 18 OF THE MUNICIPAL CODE TO AMEND THE 2012 INTERNATIONAL RESIDENTIAL CODE REGARDING DRAINAGE EROSION SEDIMENT CONTROL PERMITS**

CITY OF LONE TREE
STAFF REPORT

TO: **Mayor Millet and City Council**

FROM: **Jennifer Drybread, Planning Manager**
Lisa Albers, Capital Improvement Project Manager
Matt Archer, Chief Building Official
Kelly First, Community Development Director
John Cotten, Public Works Director

FOR: **January 17, 2017 City Council Public Hearing**

DATE: **January 10, 2017**

SUBJECT: **Proposed Amendments to the City of Lone Tree Municipal Code**
Project RG16-71

A. SUMMARY

Approval to amend the Lone Tree Municipal Code, Chapters 11, 15, 16, 17, and 18. These proposed amendments include a number of substantive and non-substantive changes (see summary and intent of proposed amendments in Section E. of this report).

B. SUGGESTED MOTION OR RECOMMENDED ACTION

I move to approve on Second Reading:

- ORDINANCE 17-01, AN ORDINANCE AMENDING CHAPTER 11 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE AND AMEND THE DOUGLAS COUNTY ROADWAY AND DESIGN STANDARDS; AMEND THE BUILDING MATERIALS ARTICLE; ADD NEW ARTICLES REGARDING STREET AND PEDESTRIAN LIGHTING AND PUBLIC RIGHTS OF WAY; AND PROVIDE FOR PENALTIES

- ORDINANCE 17-02, AN ORDINANCE AMENDING CHAPTER 15 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE THE 2017 FLOOD INSURANCE STUDY FOR DOUGLAS COUNTY AND ACCOMPANYING FLOOD INSURANCE RATE MAPS, DIGITAL FLOOD RATE MAPS AND FLOOD BOUNDARY

FLOODWAY MAPS; AMEND STORMWATER DISCHARGE DEFINITION; ADD A NEW ARTICLE REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AND PROVIDE FOR PENALTIES

- ORDINANCE NO. 17-03, AN ORDINANCE AMENDING CHAPTER 16 OF THE MUNICIPAL CODE TO REPEAL ARTICLE XXXI REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AMEND USE AND STRUCTURE RESTRICTIONS NEAR AIRPORTS; ADD A PROVISION REGARDING RAIN BARRELS; AND AMEND AND UPDATE MISCELLANEOUS PROVISIONS

- ORDINANCE NO. 17-04, AN ORDINANCE AMENDING CHAPTER 17 OF THE MUNICIPAL CODE TO AMEND AND UPDATE MISCELLANEOUS PROVISIONS

- ORDINANCE NO. 17-05, AN ORDINANCE AMENDING CHAPTER 18 OF THE MUNICIPAL CODE TO AMEND THE 2012 INTERNATIONAL RESIDENTIAL CODE REGARDING DRAINAGE EROSION SEDIMENT CONTROL PERMITS

C. BACKGROUND

From time to time the City staff undertakes an evaluation of the Municipal Code to:

- Ensure regulations are clear and consistent
- Ensure regulations are in line with current practices or procedures
- Eliminate redundant, outdated or unnecessary regulations
- Address existing problems or concerns
- Keep current with changing circumstances or technology, and
- Meet the needs of the City.

Staff from the Public Works and Community Development Departments worked together in 2016 to develop amendments to the Municipal Code that address the above list. Some of the amendments are minor in nature. The more substantive amendments are generally described to include:

- Requirements for newly installed street and pedestrian lights within the right-of-way.
- A section on Public Rights-of-Way to state the requirements for Right-of-Way Use Permits.
- Requirements for Construction and/or Right-Of-Way Permit applicants to remove utility markings within 45 days of work completion.
- Language to provide guidance on rainwater collection for residential (rain barrels).
- Further clarification of allowable nonstormwater discharge and clarification on stormwater violations and associated penalties.
- Updated regulations regarding structures that may be recommended by the Federal Aviation Administration (FAA) for mitigation measures, or for structures determined by the FAA to constitute a hazard to aircraft from Centennial Airport.

- New regulations for drainage and sediment control of single family detached homes.

A more complete description of the intent of the changes by Chapter and Article is provided following the summary of referral responses.

D. SUMMARY OF REFERRAL PROCESS AND RESPONSES

The proposed amendments were sent to all homeowners associations in the City and to selected referral agencies including utility providers, metro districts, Centennial Airport, special districts, and the Cherry Creek Basin Water Quality Authority. Following is the staff response to these referral entities or individuals:

Dan Clawson:

- Questioned why Section 15-1-50 refers to a flood insurance study date in the future.

Staff Response:
FEMA requires that every respective municipality update their code in conjunction with the revised maps and insurance studies prior to the date of the revised map and study. The February 17, 2017 maps are already approved and published on the FEMA website as “pending” and will become effective on February 17, 2017. Furthermore, the code changes proposed at this time will not take effect until around February 17, 2017.

- Recommended that the Zoning Code, Section 16-2-210, Property Maintenance, be amended to include single family detached homes so that homeowners be subject to the same requirement to remove snow from sidewalks within 24 hours as is required for non-single-family detached properties.

Staff Response:
The City Council has previously considered the issue of regulating sidewalk snow removal in single-family detached neighborhoods. One of the key challenges is effective enforcement. Unlike multi-family or commercial properties where there is an owner or management company readily available to ensure safe access to a property or business, that is not always the case with single-family homes. Residents may be out of town during a snow event or a resident may be physically unable to remove snow in a designated period of time. It would be very labor intensive for code enforcement staff to respond to complaints and achieve compliance in residential areas given the staff available and the variety of circumstances that could be at play. The City can play a role in raising awareness and seeking voluntary action among neighbors.

Rick Solomon, President, Terra Ridge HOA:

(Note: Staff met with Mr. Solomon and other representatives from the Terra Ridge HOA on November 29, 2016 to discuss their issues. Their concerns and questions appear to be satisfactorily resolved, and their follow-up response is included with the referral responses.)

- Concerned about the proposed revisions that address construction trailers and/or trash bins associated with private re-construction projects and that are temporarily stored on the public streets. These must now have a permit from the City (Chapter 11).

Staff Response:
The Municipal Code already allows the use of construction trailers and/or trash bins in the public right-of-way with an approved Right-of-Way Use Permit. Homeowner Associations (HOAs) may have additional restrictions within their covenants which may preclude the use of trailers or trash bins that are more restrictive than the City's requirements. The only proposed revision is a requirement for the permittee to install erosion control devices and traffic control per approved plans.

- Concerned about revisions to Chapters 15 and 17 regarding stormwater and additional expenditures for HOAs.

Staff Response:
The proposed revisions in Chapter 17 are solely for new subdivision construction projects, and do not pertain to existing homeowners associations. The revisions in Chapter 15 are related to the updated Federal Emergency Management Agency (FEMA) flood insurance studies and maps, the addition of three allowable nonstormwater discharges, and the placement of Article V Clearing, Grading and Land Disturbance, which was moved from Chapter 16 to Chapter 15. Article V relates to any construction project which requires a Grading, Erosion and Sediment Control (GESC) permit for construction. For this code update, no additional requirements or changes are proposed to the maintenance of existing stormwater facilities by HOAs.

- Seeks to have an HOA Design Review sign-off in the building permitting process.

Staff Response:
The City cannot legally withhold building permit applications that meet the requirements of the municipal code and building codes. However, applicants are reminded to contact the HOA by Building Division staff. Additionally, the online permit application submittal page prominently displays a reminder and the process requires any building permit applicant to check a box and accept the following disclaimer before beginning their online permit application:

"Home Owners Association Disclaimer
The issuance of a permit does not assume compliance with covenants that may be associated with the property. The permittee must contact their Homeowners Association (if applicable) to ensure that these improvements are in compliance with the Homeowners Association (HOA) covenants. The City cannot and will not enforce HOA standards; however, failure to comply with required Covenants, Conditions and Restrictions may result in delays or fines imposed by the HOA."

Centennial Airport:

- Airport staff agrees with the proposed revisions by staff to the Zoning code (Chapter 16, Sec 16-2-110 (c) regarding building structures and FAA recommendations and determinations.

E. SUMMARY AND INTENT OF PROPOSED AMENDMENTS BY CHAPTER AND ARTICLE

CHAPTER 11 Streets, Sidewalks and Public Property

Article III – Roadway Design and Construction Standards

- Adopts the latest Douglas County Roadway Design and Construction Standards with amendments relative to the City of Lone Tree. Douglas County Roadway Design and Construction Standards has been updated since our last code revision.
- Added "Violations; penalties" to set the penalty for any violations of the Roadway Design and Construction Standards. The violations/penalties for not following the Roadway Design and Construction Standards were not clear in the code.

Article IV – Building Materials

- Changed the reference of City Manager to Director of Public Works or his/her designated representative. The Director of Public Works is responsible for this section of the code.
- Added a requirement for erosion control and traffic control for any storage of building materials on public streets and sidewalks. This requirement is written on the Right-Of-Way Permit, but needed to be added to the code.

Article VI – Street and Pedestrian Lighting

- Added a new article to Chapter 11 to define the purpose of street and pedestrian lighting, allowable locations, and City acceptable street light types and wiring. The City has had a policy for 3 years that the street lights must be metered and wired

per City standards in order to be accepted and maintained by the City. This code change memorializes this policy.

Article VII – Public Rights of Way

- Added a new article to Chapter 11 to define allowable construction in the public right-of-way as well as permit requirements, fees, insurance requirements, surety, warranty, inspections, time of completion, locate information, reimbursement of City costs, landscaping, penalties, and removal of utility markings required. Prior to this code update, there was no explicit code that addressed work in the right-of-way.

CHAPTER 15 Public Works

Article II – Stormwater Management; Grading, Erosion and Sediment Control; Illicit Discharge

- Further defines nonstormwater discharges. Three additional allowable nonstormwater discharges were added to the City's MS4 permit, thereby requiring a code update to add the additional allowances.

Article III – Flood Damage Prevention

- Added a requirement that the City Clerk and Floodplain Administrator shall keep a copy of the Flood Insurance Study (FIS), Digital Flood Insurance Rate Maps (DFIRMs), Flood Insurance Rate Maps (FIRMs), and Flood Boundary Floodway Maps (FBFMs) on file and available for public inspection. City Clerk was added to this existing code requirement since he/she maintains all City documents.

Article V –Clearing, Grading and Land Disturbance

- This article was moved from Chapter 16 – Zoning into Chapter 15 – Public Works. The Clearing, Grading and Land Disturbance article applied to more than just Chapter 16, so it was moved to Chapter 15 – Public Works to cover work in the right-of-way, any SIPs, and subdivisions.
- The reference of City Engineer was changed to Director of Public Works or his/her designated representative. The Director of Public Works has the ultimate authority for this section of the code.
- Allows permits to be renewed for two (2) additional six (6) months period by the Director of Public Work or his/her designated representative. Any additional extensions may require City Council approval. Currently, the City does not have a limitation on permit renewals.
- Allows the Director of Public Works or his/her designated representative to reduce the security prior to final release. This addition allows the applicant to reduce their

security based on items that have already been completed, for which the City will not need security.
- Changed the violation of the chapter from $100 per day to $1,000 per day. This was changed to match the penalties for all other code violations with regard to Public Works.

CHAPTER 16 Zoning

Article II – General Requirements and Exceptions

- Amended Sec. 16-2-110 to address zoning requirements and procedures rather than building requirements, which are included in Chapter 18 of the Municipal Code. Changed section name from “Building restrictions” to “Use and structure restrictions.”
- Amended outdated language that was a holdover from the original County regulations, on which the City’s code was originally based, regarding Federal Aviation Administration (FAA) determination of hazards or obstructions to airport use. The proposed language provides latitude for the City in the case of mitigation measures recommended by the FAA, and provides that Site Improvement Plan applications to the City will be denied in the case of structures determined to be a hazard by the FAA.
- Added requirements for residential use of rain barrels. Prior to the passage of Colorado House Bill 16-1005, in particular, rainwater collection was not permitted except under specific circumstances. The proposed regulations comply with the requirements of this new law, and adds measures to minimize visual impacts. (Attached is a fact sheet on the State law, prepared by the Colorado State University Extension.)

Article XV – PD - Planned Development District

- Changed reference of City Engineer to Director of Public Works or his/her designated representative in selected sections where the Director of Public Works has the ultimate authority for such regulations.

Article XXII – Temporary Structures

- Changed reference of City Engineer to Director of Public Works or his/her designated representative. The Director of Public Works has the ultimate authority for this section of the code.

Article XXVII – Site Improvement Plan (SIP)

- Changed reference of City Engineer to Director of Public Works or his/her designated representative in selected sections where the Director of Public Works has the ultimate authority for such regulations.

- Deleted requirement for the specifications of irrigation equipment to be included in the SIP, as such equipment is often replaced in the field, rendering this information dated.

Article XXXI – Clearing, Grading and Land Disturbance

- Removed entire article and moved it to Chapter 15, Article VII. The Clearing, Grading and Land Disturbance article applied to more than just Chapter 16, so it was moved to Chapter 15 – Public Works to cover work in the right-of-way, any SIPs, and subdivisions.

Article XXXII – Landscaping Standards

- Changed reference of City Engineer to Director of Public Works or his/her designated representative. The Director of Public Works has the ultimate authority for this section of the code.
- Changed the requirement to allow temporary irrigation to occur for no more than two (2) growing seasons instead of one. This allows more time for plant establishment.
- Primarily deleted irrigation equipment specifications. These are very difficult to inspect for compliance and can change over time with technological advancements.
- Deleted reference to allowing the use of nontreated water for irrigation. This conflicts with the proposed rain barrel provision, and would likely be allowed if the supplying water district and health department approved such.

CHAPTER 17 Subdivisions

Article I – Administrative Provisions

- Repealed the effective date (Sec. 17-1-60) since it is no longer relevant.
- Removed the definition of City Engineer. The Director of Public Works has the ultimate authority for this section of the code.
- Added a definition for Subdivision Improvements.

Article II – General Standards, Procedures and Requirements

- Changed “public improvements” to “subdivision improvements.” This chapter refers to subdivisions and their respective improvements.
- Updated Nonresidential development review process in the chart. This now states that the final plat will be approval by City Council.
- Added references to Chapter 15. This is amended to cite the appropriate chapter.
- Added a requirement for guarantee of subdivision improvements prior to approval of construction plans and issuance of a construction permit. The current code does not state when the guarantee of subdivision improvements is due.

- Changed reference of City Engineer to Director of Public Works or his/her designated representative in selected sections where the Director of Public Works has the ultimate authority for such regulations.

Article V – General Standards, Procedures and Requirements

- Changed the reference in Sec. 17-5-60(13) from Article IX to Article VIII of Chapter 17.

Article VII – Replat of Subdivision, Where Additional Lots Are Created

- Made clear the review process where additional lots are created for single-family attached, multi-family, or nonresidential land use, and referenced the correct Article.

<u>CHAPTER 18 Building Regulations</u>

Article III – Residential Code

- Added new requirements to Chapter 18 of the Municipal Code, which amends Chapter 4 of the International Residential Code. This sets minimum requirements for drainage around homes and establishes controls for sediment leaving lots, as the existing regulations do not clearly address this for single family detached development. Requirements for other development will be regulated by the new Chapter 15.

F. PLANNING COMMISSION

The following has been taken directly from the draft minutes of the Planning Commission meeting held on December 13, 2016 (note that only Chapters 16 and 17 of the Lone Tree Municipal Code were considered by the Planning Commission as required by the Code):

Ms. Drybread introduced the proposed amendments – she stated that periodically staff reviews the municipal code to ensure that regulations address existing problems or concerns, are clear and consistent, are in line with current practices or procedures, are current with changing circumstances or technology, meet the needs of the city, and that redundant, outdated, and/or unnecessary regulations are eliminated. The proposed changes impacted Chapter 16, Zoning and Chapter 17, Subdivisions. Most of the substantive changes were Public Works-related items. The proposed changes were sent out on referral.

Ms. Albers and Ms. Drybread then presented the update in more detail. New requirements for residential rain collection would allow for two, 55-gallon collection

systems per residence (if multifamily, they would only be allowed on units of four or less). This provision was directly taken from new State regulations on residential rain collection with Lone Tree adding aesthetic standards.

Other changes to the code included moving the Article on Clearing, Grading, and Land Disturbance to Chapter 15, Public Works, of the Municipal Code, updating regulations pertaining to irrigation, changing language about public improvements to subdivision improvements, and updating regulations regarding structures that may be recommended by the Federal Aviation Administration (FAA) for mitigation measures or for structures determined by the FAA to constitutive a hazard to aircraft from Centennial Airport.

Regarding the FAA regulations, the proposed language requires applicants to submit first to the FAA for review, and then for the FAA's response to be part of the packet that gets submitted to the Planning Commission/City Council. The FAA does not have the power to enforce these regulations – they leave it to the local jurisdiction to enforce standards.

Regarding irrigation, changes included removing very specific references to irrigation equipment products that date the code and change often and allowing for temporary irrigation to last for two seasons instead of one, as it can take plants a long time to get established in Colorado.

Commissioner Dodgen inquired as to whether HOAs could prohibit rain barrels. Mr. Cotten responded that HOAs can only regulate what is in their covenants. Ms. Albers and Commissioner Carlson both expressed their understanding that state law would preempt HOA covenants from prohibiting rain barrels. Mr. Cotten further added that they are only allowed on attached residential developments of four units or less. Mr. Cotten added that HOAs could probably control rain barrel aesthetics.

Mr. Cotten stated that the City currently doesn't have any way of enforcing rain barrel standards. In the update, they would have to be outdoors, above ground, and elevated no more than two feet above ground.

Commissioner Steele inquired about requirements that rain barrels be sealed so that mosquitos don't breed in them. Mr. Cotten responded that mosquitos don't typically breed in deep water; however, they would be required to be sealed.

Commissioner Rodriguez read from a CSU packet on the subject of residential rain collection that supported the earlier assertion that HOAs could not prevent these; however, reasonable aesthetic standards could be enforced. Commissioner Dodgen then inquired as to whether through the regulation of aesthetics, HOAs could have a *de facto* prohibition on the right to have these. Commissioner Rodriguez believed that this would constitute an unreasonable regulation by an HOA and probably be unenforceable under state law.

Commissioner Steele inquired about the cost/benefits factors associated with requiring rain censors. He was curious about the state of this science, as sometimes the rain censors seemed to be inaccurate. Ms. Drybread responded that this technology has been around for at least a decade and that it saved money in terms of water conservation. Commissioner Steele replied that it would be nice to understand the quality of this technology as we were requiring it in the code. Mr. Cotten answered that they were getting better all the time – they were more accurate at monitoring conditions and efficiently managing the system.

Commissioner Steele queried Mr. Cotten whether these products were monitored and adjusted following installation. Mr. Cotten replied that in some cases they were.

Commissioner Steele suggested inviting Centennial Airport (APA) to make a presentation to the Planning Commission on their future plans for growth.

Chair Kirchner inquired about removing provisions requiring a certain type of irrigation system; how do we inspect/approve it in the field. Ms. Drybread replied that we do not currently have staff that inspects this in the field.

Chair Kirchner reiterated that having Centennial Airport (APA) present would be a good idea – this would appraise them of the future FAA review process and the airport's plans for growth.

Commissioner Heskin made comments regarding the review process in the Zoning Code, 16-27-90, regarding recommendations for approval with conditions. What was the follow up regarding applicant statements on the record? Ms. First replied that if something didn't rise to the level of a condition, then staff would follow up with the applicant during review and inspection.

Commissioner Heskin inquired about the section of the code stating that if the project where denied, it could not be brought again before the Planning Commission for a year. Commissioner Heskin hypothesized about what would happen if a project that was substantially in compliance with regulations, recommended for approval by staff, and approved by the Planning Commission, was subsequently denied by the City Council for some other reason – what would be the rationale of requiring the applicant to wait one full year before their project could be reconsidered. Ms. Drybread replied that in her 13 years of experience with the City, a project was never denied. Instead, if an applicant was heading towards denial, they would withdraw the project from consideration, revise, and then resubmit.

Chair Kirchner took exception with the order of Chapters being listed as Chapter 16, 15, and 17 in Section 17-2-10 Intent. Instead, they should be in numerical sequence (15, 16, and 17).

Commissioner Steele moved to recommend approval of the proposed amendments to the City of Lone Tree Municipal Code, Chapters 16 and 17, with Commissioner

Dodgen moving to amend the language in Section 17-2-10 Intent so that the reference to Chapter 16, 15, and 17 would be listed in numerical order, Commissioner Spencer seconded, and the motion passed 7 to 0.

Staff note: the minor language change recommended by the Planning Commission has been corrected in the proposed redlined document.

G. ATTACHMENTS

- Proposed code amendments, showing changes redlined. These changes are presented in a variety of colors, due to multiple authors working on the same document
- Referral Responses
- Colorado State University Extension, “Rainwater Collection in Colorado”

CHAPTER 11 Streets, Sidewalks and Public Property

ARTICLE I - Reserved

ARTICLE II - Reserved

ARTICLE III - Roadway Design and Construction Standards (AMENDMENTS PROPOSED)

ARTICLE IV - Building Materials (AMENDMENTS PROPOSED)

ARTICLE V – Reserved

ARTICLE VI – Street Lights (NEW ARTICLE PROPOSED)

ARTICLE VII – Public Rights of Way (NEW ARTICLE PROPOSED)

ARTICLE III Roadway Design and Construction Standards

Sec. 11-3-10. Adoption; amendments. (AMENDMENTS PROPOSED)

Sec. 11-3-20. Jurisdiction. (AMENDMENTS PROPOSED)

Sec. 11-3-30. Stop work orders. (AMENDMENTS PROPOSED)

Sec. 11-3-40. Purpose. (AMENDMENTS PROPOSED)

Sec. 11-3-50. Violations; Penalties. (AMENDMENTS PROPOSED)

Sec. 11-3-60. Street and Pedestrian Lighting

Sec. 11-3-10. ~~Adoption; amendments.~~Adoption by reference: Roadway Design and Construction Standards.

~~The Douglas County Roadway Design and Construction Standards, as amended in April, 1994 (the "Standards"), are hereby adopted by the City, with the following exceptions:~~

~~(1) Where the term *Douglas County* or *County* is found, the term *City of Lone Tree* or *City* shall be substituted; for example, where the term *County Engineer* is used, the term *City Engineer* shall be substituted.~~

~~(2) Where the term *Board of County Commissioners* is found, the term *City Council* shall be substituted, unless the context refers to a specific action taken by the Douglas County Board of County Commissioners in its adoption and administration of the Standards.~~

~~(3) Where the term *Department of Public Works*, *Road and Bridge Division*, *Engineering Division*, or *Inspection Department* is used, the term *City Engineer* shall be substituted.~~

~~(4) Section 1.2 of the Standards, "Jurisdiction," is not adopted.~~

(a) The Douglas County Roadway Design and Construction Standards, as amended, revised and updated from time to time, is hereby adopted by reference and incorporated into this Article as though fully set forth herein as the City of Lone Tree Roadway Design and Construction Standards. Except as otherwise provided, this code is adopted in full.

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(b) One (1) copy of the Douglas County Roadway Design and Construction Standards, as amended by this Chapter, shall be on file in the office of the City Clerk and may be inspected by any interested person between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, holidays excepted. This code, as adopted and amended, shall be available for sale to the public at the City offices, at a price reflecting the cost to the City.

[Section 11-3-20 is repealed and replaced by the following:

~~(Ord. 97-1 Art. 3.1)~~

~~**Sec. 11-3-20. Jurisdiction.**~~

~~The Standards shall apply to all land within the boundaries of the City.~~

~~(Ord. 97-1 Art. 3.2)~~

Sec. 11-3-20. Amendments.

The Douglas County Roadway Design and Construction Standards is amended as follows:

(1) The following terms, when used in the codes being adopted, shall have the following meanings:

Authority means the City Council of the City of Lone Tree.

Jurisdiction means the City of Lone Tree.

(2) Where the term *Douglas County* or *County or unincorporated area of Douglas County or unincorporated Douglas County* is found, the term *City of Lone Tree* or *City* shall be substituted; for example, where the term *County Engineer* is used, the term *Director of Public Works or his/her designated representative* shall be substituted.

(3) Where the term *Board of County Commissioners* is found, the term *City Council* shall be substituted, unless the context refers to a specific action previously taken by the Douglas County Board of County Commissioners.

(4) Where the term *Department of Public Works, Road and Bridge Division, Engineering Division or Inspection Department* is used, whether standing alone or modified by *Douglas County* or *County*, the term *Public Works Department* shall be substituted.

(5) Where the term *Director of Engineering Service, Engineer,* or *Inspector* is used, whether standing alone or modified by *Douglas County* or *County*, the term *Director of Public Works or his/her designated representative* shall be substituted.

(6) Where the term *Planning or Building* is used, whether standing alone or modified by *Division, Douglas County,* or *County*, the term City of Lone Tree Community Development shall be substituted.

(7) Where the *Douglas County Roadway Design and Construction Standards* reference sections of the Douglas County *Storm Drainage Design and Technical Criteria* ("*Drainage Manual*"), those references shall be interpreted to apply to the applicable sections of the current version of the *Drainage Manual.*

(8) Where the term *Blueline Copies* is used relative to plans submittals, the current industry standard for paper copy prints may be submitted.

(9) Where reference is made to one or more of the following, the applicable City of Lone Tree forms (where available), as published on the City Website, shall be substituted: *Submittal Form; Certification Notes; Acceptance Block; Required Notes; Forms.*

(10) Where the term *Douglas County Board of Commissioners* is used in the Douglas County Code in reference to approval for temporary road or lane closures, the term *Director of Public Works or his/her designated representative* shall be inserted.

(11) Section 2.1.6.3 of the Douglas County Code shall be revised to substitute the word "*typical*" in place of "*maximum*".

(12) Section 2.2.1 of the Douglas County Code is amended to note that the initial approval period will be 24 months maximum, or less if so stated in other adopted Codes or standards relative to the specified plans, reports or documents.

(13) Section 2.3.8 of the Douglas County Code (Erosion and Sedimentation Control Plans) shall be amended to reference the City of Lone Tree adopted Grading, Erosion and Sediment Control (GESC) regulations.

(14) Chapter 9 of the Douglas County Code shall amended as necessary to comply with and incorporate the City of Lone Tree Asphalt Pavement Patchback (ST-01) and/or Concrete Pavement Patchback (ST-02) details, as published on the City Website.

(15) Chapter 10 (Permit Procedures and Suretying Requirements) of the Douglas County Code shall be amended as necessary to incorporate the following: City of Lone Tree Public Works, current address and phone number; Right of Way/Construction Permit Fee is as currently adopted and published by the City.

(16) Sections 10.1.12 and 10.12 (*Licensing*) of the Douglas County Code is not adopted.

(17) Where the term *Surety* is used (e.g. Section 10.4.1 of the Douglas County Code), the terms Company (Corporate) or *Cashier's Check or Irrevocable Letter of Credit* shall be substituted.

(18) Section 15.4 (Alternate Standards) of the Douglas County Code shall be amended by deletion of the remainder of the last paragraph of the section, starting with "A County Engineering Inspector will not inspect ….".

Sec. 11-3-30. Stop work orders.

Any person, corporation, quasi-governmental agency, special district, mutual company, electric, gas or communication utility corporation, who, without first having obtained a permit

and/or who having made a cut in a public right-of-way which has settled, has failed or which has not been repaired in conformance with established City standards, shall be subject to a "Stop Work Order" issued by the City whereupon that person, corporation or utility shall, except for emergency repair work, discontinue all work within public rights-of-way within the City until such time as the required repair has been satisfactorily completed. No further permits will be issued until the repair has been made, and/or the City reimbursed for its expenses. The City may, on its own initiative, make required repairs and bill the responsible contractor. Minimum charge shall be a three-hundred-dollar administrative charge, plus costs for labor, materials and equipment on a portal-to-portal basis.

(Ord. 97-1 Art. 3.3)

Sec. 11-3-40. Purpose.

Pursuant to Section 31-16-205, C.R.S., the following description of the Standards is provided: The purpose of the ~~Douglas County~~ Roadway Design and Construction Standards~~, as amended in April, 1994, (the "Standards"),~~ is to provide minimum design and technical criteria for the analysis and design of roadway facilities. These standards include submittal procedures for drawings and specifications, submittal requirements for construction plans, design and technical criteria for roadways, pavement, bridges and major drainage structures, criteria for record drawings, roadway inspection and testing procedures, construction guidelines, trench backfill/compaction guidelines, permit procedures and ~~bond~~surety~~ing~~ requirements for contractors, acceptance procedures and requirements, utility locations, access requirements and criteria, cost estimating for public improvements, and policies concerning private roads. ~~The Standards were promulgated by the Douglas County Board of County Commissioners, 101 Third Street, Castle Rock, Colorado 80104.~~

Sec. 11-3-50. Violations; penalties.

Any person, firm or corporation violating any of the provisions of this Article or any code incorporated herein shall be deemed guilty of a misdemeanor, and any such person, firm or corporation shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation is committed, continued or permitted. Upon conviction of any such violations, such person, firm or corporation shall be punished by a fine of not more than one thousand dollars ($1,000.00) or by imprisonment for not more than one (1) year, or by both such fine and imprisonment. The issuance or granting of a permit or approval of plans and specifications shall not be deemed or construed to be a permit for or an approval of, any violation of any provisions of the Codes adopted herein.

ARTICLE IV Building Materials

Sec. 11-4-10. Temporary storage or staging of building materials on public streets and sidewalks. (AMENDMENTS PROPOSED)

Sec. 11-4-20. Enforcement.

Sec. 11-4-30. Violations; penalties. (AMENDMENTS PROPOSED)

Sec. 11-4-10. Temporary storage or staging of building materials on public streets and sidewalks.

(a) No person may place, locate, deposit, store or stage home improvement, construction or landscaping materials or other tangible property intended to be used on residential property for home improvement, construction or landscaping purposes ("building materials") on a public street, as defined in Section 16-36-20 of this Code, or a public sidewalk without first obtaining a permit from the City.

(b) A person may submit to the City an application for a permit to temporarily store or stage building materials on a public street or sidewalk. The application shall:

(1) State the names of the owner and, if different from the owner, the occupant of the residence to which the building materials will be delivered.

(2) State the address of the residence to which the building materials will be delivered.

(3) Describe in detail the item or items to be stored or staged on the public street or sidewalk, the purpose for which the item or items will be stored or staged, and the area, including approximate dimensions, of the public street or sidewalk that will be occupied by the item or items; and

(4) State the length of time needed to store or stage the item or items.

(c) The ~~City Manager~~Director of Public Works or his or her designee shall review the application and may issue a permit, subject to conditions, intended to decrease any risk that the building materials may pose or to ensure that traffic or other lawful passage is not impeded on the public street or sidewalk. Conditions may include, but are not limited to, a time limit for storing or staging the building materials on the public street or sidewalk, a requirement that the applicant install applicable erosion control devices and traffic control as per plans approved by the City, and a requirement that the applicant clean up and restore the storage or staging area after the building materials are removed.

Sec. 11-4-30. Violations; penalties.

A violation of any provision of this Article shall be punishable by a fine of not more than five hundred dollars ($500.00) per day per violation, plus court and administrative costs, as applicable. Each violation shall be deemed a separate offense for purposes of assessing a fine. In addition, the City may cause the removal of building materials, from a public street or ~~sidewalk, that~~sidewalk that are located or stored in violation of this Article and the costs of such removal shall be imposed upon the owner of the building materials.

ARTICLE VI Street and Pedestrian Lighting (NEW ARTICLE PROPOSED)

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Sec. 11-6-10. Purpose.

Sec. 11-6-20. Acceptable Streetlights.

Sec. 11-6-30. Locations.

Sec. 11-6-10. Purpose.

(a) Purpose. The purpose of this Article is to ensure that street and pedestrian lighting installed in the City rights-of-way is designed to complement the surrounding area

while promoting and protection the public health, safety, and welfare by assisting motorists and by providing improved illumination.

Sec. 11-6-20. Acceptable Streetlights.

(a) All newly installed street and pedestrian lights shall meet the currently approved City of Lone Tree street lighting design standards. All lights shall be on a separately metered system.

(b) At the completion of construction, the person or entity responsible for constructing street and pedestrian lights shall apply to the City for inspection and acceptance of the installed lights. After any discrepancies have been resolved, the City shall accept the installed lights in the right-of-way for ownership and maintenance.

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Sec. 11-6-30. Locations.

(a) No street light shall project into any roadway so as to obstruct or inhibit traffic.

(b) Street and pedestrian lights shall be installed in areas outside of sidewalks, unless absolutely necessary and as approved by the City prior to construction. In the case where any street or pedestrian light is allowed to be located on a sidewalk, it shall be designed and installed in such a manner as to not obstruct the passage of pedestrians and shall comply with the Americans with Disabilities Act, as amended.

(c) All new or replacement street or pedestrian lights shall be installed with underground electrical service.

ARTICLE VII Public Rights of Way (NEW ARTICLE PROPOSED)

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Division 1

Sec. 11-7-10. Purpose.

Sec. 11-7-20. Definitions.

Sec. 11-7-30. Authority.

Sec. 11-7-40. Developer Ownership of Infrastructure.

Sec. 11-7-50. Permit Required.

Sec. 11-7-60. Permit Application.

Sec. 11-7-70. Blanket Maintenance Permits.

Sec. 11-7-80. Permit Fees.

Sec. 11-7-90. Insurance.

Sec. 11-7.100. Indemnification.

Sec. 11-7-110. Letters of Credit or other surety accepted by the City.

Sec. 11-7-120. Warranty

Sec. 11-7-130. Inspections.

Sec. 11-7-140. Time of Completion.

Sec. 11-7-150. Locate Information.

Sec. 11-7-160. Newly resurfaced and constructed streets.
Sec. 11-7-170. Reimbursement of City costs.
Sec. 11-7-180. Landscaping.
Sec. 11-7-190. Penalties.

Division 2
Sec. 11-7-210. Definitions.
Sec. 11-7-220. Removal of utility markings required.
Sec. 11-7-230. Penalty

Division 1 - Permits

Sec. 11-7-10. - Purpose.

(a) Purpose. The purpose of this Article is to establish principles, standards and procedures for the placement of facilities, construction, excavation, encroachments and work activities within, under or upon any public right-of-way and to protect the integrity of the City's street system.

(b) Objectives. In the interests of the general welfare, public and private uses of public rights-of-way should be accommodated; however, the City must ensure that the primary purpose of the public right-of-way, passage of pedestrian and vehicular traffic, is protected. The use of the public rights-of-way by private users is secondary to these public objectives. This Article's objectives are to:

(1) Minimize public inconvenience.

(2) Protect the City's infrastructure investment by establishing repair standards for the pavement, facilities and property in the public rights-of-way.

(3) Standardize regulations and thereby facilitate work within the rights-of-way.

(4) Maintain an efficient permit process.

(5) Conserve and fairly apportion the limited physical capacity of public rights-of-way held in public trust by the City.

(6) Establish a public policy for enabling the City to discharge its public trust consistent with the rapidly evolving federal and state regulatory policies, industry competition and technological development.

(7) Promote cooperation among permittees and the City in the occupation of the public rights-of-way, and work therein, in order to eliminate duplication of facilities that is wasteful, unnecessary or unsightly; lower the permittees' and the City's costs of providing services to the public; and minimize street cuts.

(8) Protect the public health, safety and welfare.

Sec. 11-7-20. - Definitions.

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For purposes of this Article, the following terms shall have the following meanings:

Access structure means any structure providing access to facilities in the public right-of-way.

Approved alignment means the designed horizontal and vertical alignment of facilities to be installed in the public right-of-way which is approved by the City at the time the permit is issued, plus any alignment variance tolerances set forth in the Construction and Excavation Standards and any alignment variances approved by the City in accordance with the Construction and Excavation Standards.

Construction and Excavation Standards means the document entitled *Construction and Excavation Standards for Work in Public Rights-of-Way*, as adopted by resolution of the City Council and amended from time to time.

Contractor means a person, partnership, corporation or other legal entity which undertakes to construct, install, alter, move, remove, trim, demolish, repair, replace, excavate or add to any improvements or facilities in the public right-of-way, or that requires work, workers or equipment to be in the public right-of-way in the process of performing the above-named activities.

Developer means the person, partnership, corporation or other legal entity improving a parcel of land within the City and being legally responsible to the City for the construction of infrastructure within a subdivision or as a condition of a building permit.

Emergency means any event which may threaten public health or safety, or that results in an interruption in the provision of service, including but not limited to damaged or leaking water or gas conduit systems, damaged, obstructed or leaking sewer or storm drain conduit systems and damaged electrical and communications facilities.

Excavate or *excavation* means to dig into or in any way remove or penetrate any part of a public right-of-way, including trenchless excavation such as boring, tunneling and jacking.

Facilities means any pipe, conduit, wire, cable, amplifier, transformer, fiber optic cable, antenna, pole, streetlight, duct, fixture, appurtenance or other like equipment used in connection with transmitting, receiving, distributing, offering and providing utility and other services, whether above or below ground.

Infrastructure means any public facility, system or improvement, including water and sewer mains and appurtenances, storm drains and structures, streets, alleys, traffic signal poles and appurtenances, conduits, signs, landscape improvements, sidewalks and public safety equipment.

Landscaping means grass, ground cover, shrubs, vines, hedges, trees and nonliving natural materials commonly used in landscape development, as well as attendant irrigation systems.

Major installation means work in the public right-of-way involving an excavation exceeding five hundred (500) feet in length.

Permit means an authorization for use of the public rights-of-way granted pursuant to this Division.

Permittee means the holder of a valid permit issued pursuant to this Division.

Public right-of-way means any public street, way, place, alley, sidewalk, easement, park, square, median, parkway, boulevard or plaza that is dedicated to public use.

Routine maintenance means maintenance of facilities or landscaping in the public right-of-way which does not involve excavation, installation of new facilities, lane closures, sidewalk closures or damage to any portion of the public right-of-way.

Work means any labor performed within a public right-of-way or any use or storage of equipment or materials within a public right-of-way, including but not limited to excavation; construction of streets, fixtures, improvements, sidewalks, driveway openings, bus shelters, bus loading pads, streetlights and traffic signal devices; construction, maintenance and repair of all underground facilities, such as pipes, conduit, ducts, tunnels, manholes, vaults, cable, wire or any other similar structure; maintenance of facilities and installation of overhead poles used for any purpose. Notwithstanding the foregoing, *work* shall not include routine maintenance.

Sec. 11-7-30. - Authority.

(a) A permittee's rights hereunder shall at all times be subject to the authority of the City, which includes the power to adopt and enforce ordinances, including amendments to this Division, necessary for the safety, health and welfare of the public.

(b) The City reserves the right to exercise its authority, notwithstanding any provision in this Division or any permit to the contrary. Any conflict between the provisions of any permit and any other present or future lawful exercise of the City's police power shall be resolved in favor of the latter.

Sec. 11-7-40. - Developer ownership of infrastructure.

The construction of infrastructure in new developments is the responsibility of the developer. Once a public right-of-way has been dedicated to the City, all work in that public right-of-way, including the installation of new infrastructure by a developer, shall be subject to this Chapter.

Sec. 11-7-50. - Permit required.

(a) No person except an employee or official of the City or a person exempted by contract with the City shall undertake or permit to be undertaken any work in a public right-of-way without first obtaining a permit from the City as set forth in this Division. Copies of the permit and associated documents shall be maintained on the work site and available for inspection upon request by any officer or employee of the City.

(b) No permittee shall perform work in an area larger or at a location different, or for a longer period of time than that specified in the permit. If, after work is commenced under an approved permit, it becomes necessary to perform work in a larger or different area or for a longer period of time than what the permit specifies, the permittee shall notify the City immediately and shall file a supplementary application for the additional work within twenty-four (24) hours.

(c) Permits shall not be transferable or assignable without the prior written approval of the City.

(d) Any person conducting any work within the public right-of-way without having first obtained the required permit shall immediately cease all activity and obtain a permit before work may be resumed, except for emergency operations.

Sec. 11-7-60. - Permit application.

(a) An applicant for a public right-of-way permit shall file a written application on a form furnished by the City, which includes the following information:

(1) The date of application.

(2) The name, address and telephone number of the applicant and any contractor or subcontractor which will perform any of the work.

(3) A plan showing the work site, the public right-of-way boundaries, all infrastructure in the area and all landscaping in the area.

(4) The purpose of the proposed work.

(5) A traffic control plan in accordance with the Construction and Excavation Standards.

(6) The dates for beginning and ending the proposed work, proposed hours of work and the number of actual work days required to complete the project.

(b) The applicable permit fees shall accompany the application when submitted.

(c) For any work in the public right-of-way which includes excavation, in addition to the information required by Subsection (a) hereof, the application shall include the following information:

(1) An itemization of the total cost of construction, including labor and materials but excluding the cost of any facilities being installed.

(2) Copies of all permits (including required insurance, deposits, letters of credit, and warranties) required to do the proposed work, whether required by federal or state law or City resolution, ordinance or regulation.

(d) In addition to the information required by Subsections (a) and (c) hereof, an applicant for a public right-of-way permit for a major installation shall submit the following information:

(1) Field-verified locates of all existing facilities required to be located by the Construction and Excavation Standards, which locates shall be compiled and submitted according to the Construction and Excavation Standards.

(2) Engineering construction drawings or site plans for the proposed work in a format acceptable to the City and signed by a professional engineer licensed in the State, except that an applicant expressly exempt from the signature requirement pursuant to Section 12-25-103, C.R.S., need not include the signature of a licensed professional engineer.

(e) An applicant shall update a permit application within ten (10) days after any material change occurs.

(f) Applicants may apply jointly for permits to work in public rights-of-way at the same time and place. Applicants who apply jointly for permits may share in the payment of the permit fees. Applicants must agree among themselves as to the portion each shall pay, and if no agreement is reached, payment in full shall be required of all applicants.

(g) The applicant for a public right-of-way permit shall be the contractor performing the work

(h) By signing an application, the applicant is certifying to the City that the applicant is in compliance with all other permits issued by the City and that the applicant is not delinquent in any payment due to the City for prior work. This certification shall not apply to outstanding claims which are honestly and reasonably disputed by the applicant, if the applicant and the City are negotiating in good faith to resolve the dispute.

Sec. 11-7-70. - Blanket maintenance permits.

(a) A public right-of-way permit shall not be required for routine maintenance in the public right-of-way, as the term *routine maintenance* is defined in Section 11-7-20. However, other maintenance operations within the public right-of-way which involve traffic lane closures or sidewalk closures shall require a public right-of-way permit. To expedite the process for ongoing maintenance operations, owners of facilities within the public right-of-way may, at their sole option and in the alternative to obtaining individual public right-of-way permits, obtain a blanket maintenance permit pursuant to this Section.

(b) A blanket maintenance permit shall be valid from the date of issuance of the permit through December 31 of the same year. Under no circumstances shall a blanket maintenance permit be valid for more than one (1) year.

(c) A blanket maintenance permit shall not, under any circumstances, authorize any pavement disturbance or installation of new facilities. Notwithstanding the foregoing, existing facilities may be removed and replaced with new facilities, if no excavation or pavement disturbance is required.

(d) Any person seeking a blanket maintenance permit shall file an application on a form provided by the City which includes the following information:

(1) The date of application.

(2) The name, address and telephone number of the applicant.

(3) A general description of the maintenance operations.

(4) Any location of maintenance operations known at the time of application.

(5) Traffic control plans as required by this Section and the Construction and Excavation Standards.

(e) The applicable permit fee as set by the Construction and Excavation Standards shall accompany the application when submitted.

(f) Blanket maintenance permits shall be subject to applicable provisions of the Construction and Excavation Standards.

Sec. 11-7-80. - Permit fees.

(a) Before a public right-of-way permit is issued, the applicant shall pay to the City a permit fee, which shall be determined in accordance with the fee schedule contained in the Construction and Excavation Standards. Permit fees shall be reasonably related to the costs of managing the public rights-of-way. These costs include, but are not limited to, the costs of issuing right-of-way permits, verifying right-of-way occupation, mapping

right-of-way occupation, inspecting work, administering this Division and, if applicable, costs relating to restoration of the public right-of-way to remedy degradation of that public right-of-way caused by the permittee.

(b) Restoration fees.

(1) Restoration fees shall only be charged to the applicant if the applicant chooses not to perform the required restoration of the public right-of-way to the City's standards, making the City responsible for performing the required restoration. The applicant shall decide at the time of application whether the applicant will perform the required restoration, and the applicant's decision shall be final.

(2) No restoration fees shall be required for a public right-of-way permit which does not include excavation.

(3) Restoration fees collected by the City shall be placed in a separate account for general street maintenance and construction.

(4) Restoration fees may be waived in the City's discretion when additional circumstances exist which would make restoration unnecessary, such as poor street quality or proposed street resurfacing or construction by the City. These circumstances are outlined in more detail in the section of the Construction and Excavation Standards addressing permit fees.

Sec. 11-7-90. - Insurance.

(a) Unless otherwise specified in a franchise agreement or maintenance or license agreement between a permittee and the City, prior to the granting of any permit, the permittee shall carry and maintain in full effect at all times the following insurance coverage:

(1) Commercial general liability insurance, including broad-form property damage, completed operations contractual liability, explosion hazard, collapse hazard, underground property damage hazard, commonly known as XCU, for limits not less than one million dollars ($1,000,000.00) each occurrence for damages of bodily injury or death to one (1) or more persons; and five hundred thousand dollars ($500,000.00) each occurrence for damage to or destruction of property.

(2) Workers compensation insurance as required by state law.

(b) The permittee shall file with the City proof of such insurance coverage in a form satisfactory to the City.

(c) Upon prior written approval of the City, a permittee may provide self-insurance with the minimum coverage limits set forth in Paragraphs (a)(1) and (a)(2) hereof.

Sec. 11-7-100. - Indemnification.

(a) Each permittee, for himself or herself and his or her related entities, agents, employees, subcontractors and the agents and employees of said subcontractors shall hold the City harmless and defend and indemnify the City, its successors, assigns, officers, employees, agents and appointed and elected officials from and against all liability or damage and all claims or demands whatsoever in nature and reimburse the City for all its reasonable expenses, including reasonable attorney fees and costs, as incurred, arising out of any work or activity in the public right-of-way, including but not limited to the actions or omissions of the permittee, its employees, representatives, agents, contractors, related entities, successors and assigns or the securing of and the exercise

by the permittee of any rights granted in the permit, including any third-party claims, administrative hearings and litigation, whether or not any act or omission complained of is authorized, allowed or prohibited by this Division or other applicable law. A permittee shall not be obligated to hold harmless or indemnify the City for claims or demands to the extent that they are due to the negligence or willful and wanton acts of the City or any of its officers, employees or agents.

(b) Following the receipt of written notification of any claim, the permittee shall have the right to defend the City with regard to all third-party actions, damages and penalties arising in any way out of the exercise of any rights in the permit. If at any time, however, a permittee refuses to defend the City, and the City elects to defend itself with regard to such matters, the permittee shall pay all expenses incurred by the City related to its defense, including reasonable attorney fees and costs.

(c) If a permittee is a public entity, the indemnification requirements of this Section shall be subject to the provisions of the Colorado Governmental Immunity Act.

(d) If any provision of this Section conflicts with any provision of a valid, effective franchise agreement between the permittee and the City, the conflicting provision of this Section shall not apply to the franchisee, and the franchisee shall instead honor the provision of the franchise agreement.

(e) If any provision of this Section conflicts with any provision of a valid, effective median maintenance agreement between a special district and the City, the conflicting provision of this Section shall not apply to the special district, and the special district shall instead honor the provision of the median maintenance agreement.

Sec. 11-7-110. - Letters of credit and other City accepted sureties.

(a) Before a public right-of-way permit is issued, the applicant shall file with the City surety, (allowable sureties include a company (corporate) check, cashier's check or irrevocable letter of credit), in favor of the City in an amount equal to the total cost of construction, including labor and materials but excluding the cost of any facilities being installed, or five thousand dollars ($5,000.00), whichever is greater. The surety shall be executed by the applicant as principal and by at least one (1) surety upon whom service of process may be had in the State. The surety shall be conditioned upon the applicant fully complying with all provisions of City ordinances, resolutions and regulations and upon payment of all judgments and costs rendered against the applicant for any violation of any City resolution, regulation or ordinances or state law arising out of any negligent or wrongful acts of the applicant in the performance of work pursuant to the permit.

(b) The City may bring an action on the surety on its own behalf or on behalf of any person so aggrieved as beneficiary.

(c) The letter of credit shall be approved by the City prior to the issuance of the permit. The City may waive the requirements of any such letter of credit upon finding that the applicant has financial stability and assets located in the State to satisfy any claims intended to be protected against by the security required by this Section.

(d) A letter of responsibility, in a form acceptable to the City, shall be accepted from special districts and governmental agencies in lieu of a surety.

(e) A blanket surety of sufficient amount to cover all proposed work during the upcoming year may be filed with the City on an annual basis in lieu of the project-specific performance suretys or letters of credit required by Subsection (a) hereof. The form and amount of the blanket surety shall be subject to the prior review and approval of the City.

Should the blanket surety be deemed insufficient by the City based on the work to date, the City may require additional, project-specific performance sureties or letters of credit pursuant to Subsection (a) hereof.

(f) The performance surety, blanket surety, letter of credit or letter of responsibility shall remain in force and effect for a minimum of two (2) years after completion and acceptance of the street cut, excavation or lane closure.

(g) If any provision of this Section conflicts with any provision of a valid, effective franchise agreement between the applicant and the City, the conflicting provision of this Section shall not apply to the franchisee, and the franchisee shall instead honor the provision of the franchise agreement.

(h) If any provision of this Section conflicts with any provision of a valid, effective maintenance agreement between a special district and the City, the conflicting provision of this Section shall not apply to the special district, and the special district shall instead honor the provision of the median maintenance agreement.

Sec. 11-7-120. - Warranty.

(a) A permittee, by acceptance of the permit, expressly warrants and guarantees complete performance of the work in a manner acceptable to the City and in accordance with this Division and the Construction and Excavation Standards and warrants and guarantees all work done for a period of two (2) years after the date of probationary acceptance.

(b) Under the warranty, the permittee shall, at its own expense, repair or replace, at the discretion of the City, any portion of the work that fails, is defective, is unsound or is unsatisfactory because of but not limited to design, engineering, materials or workmanship.

(c) The warranty period shall begin on the date of the City's probationary acceptance of the work. If repairs are required during the warranty period, those repairs need only be warranted until the end of the initial two-year period starting with the date of probationary acceptance.

(d) At any time prior to completion of the warranty period, the City may notify the permittee in writing of any needed repairs. If the defects are determined by the City to be an imminent danger to the public health, safety and welfare, the permittee shall begin repairs within twenty-four (24) hours of receipt of the written notice and continue the repairs until completion. Nonemergency repairs shall be completed within thirty (30) days after notice.

(e) The warranty shall cover only those areas of work performed by the permittee which provided the warranty and not directly impacted by the work of any other permittee or the City. If a portion of work warranted by a permittee is subsequently impacted by work of another permittee, another user of the right-of-way or the City during the warranty period, the other permittee or the City, as applicable, shall assume responsibility for repair to the subsequently impacted portion of the public right-of-way.

Sec. 11-7-130. - Inspections.

(a) At a minimum, the following four (4) inspections shall take place:

(1) Preconstruction inspection. The permittee shall request that the City conduct a preconstruction inspection, to determine any necessary conditions for the permit.

(2) Completed work inspection. The permittee shall notify the City immediately after completion of work. The City shall inspect the work within twenty-one (21) days of the

permittee's notification. Probationary acceptance shall be made if all work complies with this Division, the Construction and Excavation Standards and any other applicable City regulation, ordinance or resolution. Written notice of probationary acceptance shall be sent to permittee listed on the permit application.

(3) Warranty inspection. Approximately thirty (30) days prior to the expiration of the two-year warranty period, the City shall conduct a final inspection of the work. If the work is still satisfactory, the letter of credit shall be returned or allowed to expire, and the City shall issue a notice of final acceptance.

(4) Utility marking inspection. The City shall conduct a utility marking inspection pursuant to Division 2 of this Chapter.

(b) Upon review of the application for a permit, the City shall determine how many additional inspections, if any, may be required. Required inspections shall be listed on the permit. For a permit which does not include excavation, the City may waive any or all of the above-listed inspections.

Sec. 11-7-140. - Time of completion.

(a) All work covered by the permit shall be completed within the time period stated on the permit, unless an extension has been granted by the City in writing; in which case, all work shall be completed within the time period stated in the written extension. An extension may be assessed a charge and additional fees.

(b) Permits shall be void if work has not commenced within thirty (30) days after issuance, unless an extension has been granted by the City in writing. The permittee shall submit a written request for such extension, and the City shall either grant or deny the request within five (5) days of receipt of the request.

Sec. 11-7-150. - Locate information.

(a) Any person owning facilities in the public right-of-way shall provide field locate information to the City and any other permittee with a valid public right-of-way permit which authorizes locate pothole excavation or other excavation work. Within seven (7) days of receipt of a written request from the City or such a permittee, the facility owner shall field locate facilities in the public right-of-way in which the work will be performed.

(b) For major installations, a permittee shall obtain a public right-of-way permit to locate other existing facilities as provided in the Construction and Excavation Standards. The location of such facilities shall be field-verified in a manner approved by the City.

(c) Before beginning excavation in any public right-of-way, a permittee shall contact the Utility Notification Center of Colorado (UNCC) and, to the extent required by Section 9-1.5-102, et seq., C.R.S., make inquiries of all ditch companies, utility companies, districts, local governments and all other agencies that might have facilities in the area of work to determine possible conflicts. The permittee shall contact the UNCC and request field locates of all facilities in the area pursuant to UNCC requirements. Field locates shall be marked prior to commencing work.

Sec. 11-7-160. - Newly resurfaced and constructed streets.

(a) For newly resurfaced and constructed streets, no excavation in the pavement shall be permitted within two (2) years of the completion of the resurfacing or construction.

(b) The City shall publish once, in a newspaper of general circulation in the City each year, a list of those streets that will be resurfaced or constructed in that year. The list shall also be published on the City's website.

(c) Exemption. In rare circumstances, the City may grant an exemption from this Section in accordance with the following procedures:

(1) A request for exemption shall be in writing on a form acceptable to the City and shall contain the following information, at a minimum:

a. A detailed and dimensional engineering plan that identifies and accurately represents all public rights-of-way and other property that will be impacted by the proposed work and the method of construction.

b. The location, width, length and depth of the proposed excavation.

c. A statement as to how any of the criteria set forth in Paragraph (c)(2) hereof apply to the proposed work.

(2) Criteria for approval. In determining whether an exemption should be granted, the City shall consider the following criteria:

a. Whether alternative utility alignments that do not involve excavating in the street are available.

b. Whether the proposed excavation can reasonably be delayed until after the two-year period has elapsed.

c. Whether duct, conduit or other facilities are reasonably available from another user of the public right-of-way.

d. Whether the proposed work involves joint trenching or joint use and the number of users to share in the trenching or use.

e. Whether the proposed work is to be by horizontal boring, tunneling or open trenching.

f. Whether applicable law requires the applicant to provide service to a particular customer and whether denial of the exemption would prevent the applicant from providing such service.

g. Whether the purpose of the proposed work is to provide service to a particular building or a customer within a building who has requested such service and whether denial of the exemption would prevent the applicant from providing such service.

h. Whether the work is limited to locate potholing to provide locate information.

(d) Exemptions for emergency operations. Emergency operations in newly resurfaced or constructed streets shall be permitted.

Sec. 11-7-170. - Reimbursement of City costs.

(a) The City may make any repairs necessary to eliminate any imminent danger to the public health or safety without notice to any permittee, at the responsible permittee's expense.

(b) For any work not performed by a permittee as directed by the City, but not constituting imminent danger to the public health or safety, the City shall provide written notice to the permittee, ordering that the work be corrected within ten (10) days of the date of the notice. If the work is not corrected within the ten-day period, the City may correct the work at the permittee's expense.

(c) Costs of any work performed by the City pursuant to this Section shall be billed to the permittee. The permittee shall also be responsible for any direct costs incurred by the

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City. The permittee shall pay all such charges within thirty (30) days of the statement date. If the permittee fails to pay such charges within the prescribed time period, the City may, in addition to taking other collection remedies, seek reimbursement through the surety. Furthermore, the permittee may be barred from performing any work in the public right-of-way, and under no circumstances will the City issue any further permits of any kind to said permittee, until all outstanding charges (except those outstanding charges that are honestly and reasonably disputed by the permittee and being negotiated in good faith with the City) have been paid in full.

Sec. 11-7-180. - Landscaping.

(a) All hardscape and landscaping installed within the City right of way shall be the responsibility of the adjacent homeowners' association, property association, or special district. The City shall only be responsible for the maintenance and repair of streets, curbs, gutters, approved street lights, and sidewalks.

(b) Maintenance of landscaping within the right of way for all properties with the exception of single-family detached shall adhere to Section 16-2-210.

(c) Single-family detached properties and platted subdivisions shall adhere to the requirements in this section.

(d) Any roadway pavers installed within the City right of way shall be the responsibility of the homeowners' association or special district that installed the pavers. The City will require execution of a maintenance or license agreement which will establish responsibility of the pavers.

Sec. 11-7-190. - Penalties.

(a) If any contractor or permittee is found guilty of or pleads guilty to a violation of this Division, he or she shall be punished as provided in Chapter 1, Article 4. Each and every day or portion thereof during which a violation is committed, continues or is permitted shall be deemed a separate offense.

(b) In addition to or in lieu of the penalties set forth in Subsection (a) hereof, the City may impose the following monetary penalties:

(1) For any occupancy of a travel lane or any portion thereof beyond the time periods or days set forth in the traffic control plan approved by the City:

a. In arterial and collector streets during the hours of 6:30 a.m. through 8:30 a.m. and 3:30 p.m. through 6:00 p.m., Monday through Friday: one hundred dollars ($100.00) for each fifteen (15) minutes, or portion thereof, for a maximum of three thousand dollars ($3,000.00) per day.

b. In arterial and collector streets during any time other than the times specified in Subparagraph (b)(1)a. hereof, or in local streets at any time: fifty dollars ($50.00) for each fifteen (15) minutes, or portion thereof, for a maximum of one thousand five hundred dollars ($1,500.00) per day.

(2) For commencing work without a valid permit: five hundred dollars ($500.00), plus twice the applicable permit fee.

(3) For facilities installed outside of the approved alignment: ten dollars ($10.00) per linear foot. This penalty shall not be imposed if the facilities are removed or relocated to comply with the approved alignment or the facilities are abandoned per City approval or the alternate alignment is approved by the City.

(4) For any other violation of a permit: two hundred fifty dollars ($250.00) per violation, with no maximum amount.

(c) The penalties set forth in this Section shall not be the City's exclusive remedy for violations of this Division and shall not preclude the City from bringing a civil action to enforce any provision of a public right-of-way permit or to collect damages or recover costs associated with any use of the public rights-of-way. Furthermore, the enforcement of one (1) penalty shall not preclude the City from enforcing any other penalty.

Division 2 - Utility Markings

Sec. 11-7-210. - Definitions.

For the purposes of this Division, the following terms shall have the following meanings:

Permittee means the holder of a valid permit issued pursuant to this Division.

Public right-of-way means any public street, way, place, alley, sidewalk, easement, park, square, median, parkway, boulevard or plaza that is dedicated to public use.

Utility marking means a mark made of colored or metallic paint or similar material or utilizing any adhesive material of whatever description or a flag or similar removable device or item used by a public utility or its agent in a public right-of-way to mark the existing or future location of pipelines, cables, poles, wires or other similar features.

Sec. 11-7-220. - Removal of utility markings required.

All utility markings shall be fully and completely removed or camouflaged from public rights-of-way utilizing a method that is least destructive to the existing improvements, and which method has been approved by the City. The removal shall occur no later than forty-five (45) days after completion of the work. The right-of-way permittee or other persons (not under a City permit) that originally caused the utility markings to be placed shall be solely responsible for removal of the utility marking.

Sec. 11-7-230. - Penalty.

Any person who is convicted of a violation of this Division shall, upon conviction, be punished by a fine not to exceed the maximum fine allowed under Chapter 1 of this Code. Each day such violation is committed or continues shall constitute a separate offense. As an additional means of enforcement, and not as an alternative to or substitute for prosecution for violation of this Division, the City may remove or eradicate any utility markings which are not removed pursuant to this Division and bill the party responsible for such removal the full cost incurred by the City to effect such removal. Any such costs incurred shall be immediately due and payable, and failure to pay such costs in full within thirty (30) days of billing therefor by the City shall subject the responsible party to interest on the unpaid balance at the rate of twelve percent (12%) per annum, compounded

monthly. Any requests for future permits by such permittee shall be denied until all unpaid balances are paid in full.

CHAPTER 15 Public Works

ARTICLE I - Adoption of Codes by Reference (PROPOSED AMENDMENTS)

ARTICLE II - Stormwater Management; Grading, Erosion and Sediment Control; Illicit Discharge (PROPOSED AMENDMENTS)

ARTICLE III - Flood Damage Prevention

ARTICLE IV - Floodplain - Overlay District

ARTICLE V – Clearing, Grading and Land Disturbance (PROPOSED AMENDMENTS)

ARTICLE I Adoption of Codes by Reference

Sec. 15-1-10. Adoption by reference: Storm Drainage Design and Technical Criteria Manual.

Sec. 15-1-20. Amendments.

Sec. 15-1-30. Adoption by reference: Grading, Erosion and Sediment Control Manual.

Sec. 15-1-40. Amendments.

Sec. 15-1-50. Adoption by reference: Flood Insurance Study for Douglas County, Colorado and Incorporated Areas. (PROPOSED AMENDMENTS)

Sec. 15-1-50. Adoption by reference: Flood Insurance Study for Douglas County, Colorado and Incorporated Areas.

(a) The Flood Insurance Study for Douglas County, Colorado and Incorporated Areas, a scientific and engineering report by the Federal Emergency Management Agency, dated ~~September 30, 2005~~February 17, 2017, as amended, revised and updated from time to time, with accompanying Flood Insurance Rate Maps, Digital Flood Rate Maps and Flood Boundary Floodway Maps, and any revisions thereto, is hereby adopted by reference and incorporated into this Article as though fully set forth herein. Except as otherwise provided, this Flood Insurance Study is adopted in full.

(b) One (1) copy of The Flood Insurance Study for Douglas County, Colorado and Incorporated Areas, dated ~~September 30, 2005~~February 17, 2017, as amended, revised and updated from time to time, with accompanying Flood Insurance Rate Maps, Digital Flood Rate Maps and Flood Boundary Floodway Maps, and any revisions thereto, certified to be a true copy by the Mayor and City Clerk, shall be on file in the office of the City Clerk and may be inspected by any interested person between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, holidays excepted. This Flood Insurance Study, as adopted and amended, shall be available for sale to the public at the City offices at a price reflecting the cost to the City.

(Ord. 13-08 Art. 5)

ARTICLE II Stormwater Management; Grading, Erosion and Sediment Control; Illicit Discharge

Sec. 15-2-10. Definitions. (PROPOSED AMENDMENTS)

Sec. 15-2-20. Illicit discharge detection and elimination — violations.

Sec. 15-2-30. Prohibition of illicit connections — violations.

Sec. 15-2-40. Implementation of BMPS — violations.

Sec. 15-2-50. Notification of spills — violations.

Sec. 15-2-60. Grading, erosion and sediment control; drainage, erosion and sediment control — violations.

Sec. 15-2-70. Operation and maintenance of stormwater management facilities — violations.

Sec. 15-2-80. Inspections.

Sec. 15-2-90. Administration and enforcement.

Sec. 15-2-100. Civil enforcement.

Sec. 15-2-110. Penalty for violation.

Sec. 15-2-120. Concurrent regulation.

Sec. 15-2-10. Definitions.

Unless the context otherwise requires, these terms and phrases shall have the following meanings:

Nonstormwater discharge means any discharge to the MS4 that is not composed entirely of stormwater, except as specifically allowed herein. *Nonstormwater discharges* may include, but are not limited to: soil sediments from erosion of soils at construction sites; excessive nutrients such as nitrates and phosphates; paints, varnishes and solvents; oil and other automotive fluids; nonhazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter or other discarded or abandoned objects and accumulations that may cause or contribute to pollution; floatables; pesticides, herbicides and fertilizers; hazardous materials and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind. *Nonstormwater discharges* specifically do not include landscape irrigation, lawn watering, diverted stream flows, irrigation return flow, rising groundwaters, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, springs, flows from riparian habitats and wetlands, water line flushing in accordance with the Colorado Department of Public Health and Environment's Low Risk Discharge Guidance: Potable Water, discharges from potable water sources in accordance with the Colorado Department of Public Health and Environment's Low Risk Discharge Guidance: Potable Water, foundation drains, air conditioning condensation, water from crawl space pumps, footing drains, individual residential car washing, dechlorinated swimming pool discharges in accordance with the Colorado Department of Public Health and Environment's Low Risk Discharge Guidance: Swimming Pools, water incidental to street sweeping (including associated sidewalks and medians) and that is not associated with construction, dye testing in accordance with the manufacturer's recommendations, stormwater runoff with incidental pollutants, discharges resulting from emergency fire fighting activities, ~~and~~

discharges authorized by (a) separate Colorado Discharge Permit System (CDPS) or National Pollutant Discharge Elimination System (NPDES) permit, agricultural stormwater runoff, and discharges that are ~~or~~ in accordance with the Colorado Department of Public Health and Environment Water Quality Control Division Low Risk Discharge Guidance documents, as amended.

ARTICLE III Flood Damage Prevention

Division 1 - General Provisions

Division 2 - Flood Hazard Reduction

Division 3 - Critical Facilities

Division 1 General Provisions

Sec. 15-3-10. Statement of purpose.

Sec. 15-3-20. Methods of reducing flood losses.

Sec. 15-3-30. Definitions.

Sec. 15-3-40. Application.

Sec. 15-3-50. Basis for establishing the special flood hazard areas; adoption by reference. (PROPOSED AMENDMENTS)

Sec. 15-3-60. Concurrent floodplain regulation.

Sec. 15-3-70. Establishment of development permit.

Sec. 15-3-80. Compliance.

Sec. 15-3-90. Abrogation and greater restrictions.

Sec. 15-3-100. Interpretation.

Sec. 15-3-110. Warning and disclaimer of liability.

Sec. 15-3-120. Severability.

Sec. 15-3-130. Designation of Floodplain Administrator.

Sec. 15-3-140. Duties and responsibilities of Floodplain Administrator.

Sec. 15-3-150. Permit procedures.

Sec. 15-3-160. Variance procedures.

Sec. 15-3-170. Penalties.

Sec. 15-3-50. Basis for establishing the special flood hazard areas; adoption by reference.

The special flood hazard areas (SFHAs) identified by the Federal Emergency Management Agency in a scientific and engineering report, entitled "The Flood Insurance Study for Douglas County, Colorado and Incorporated Areas," dated ~~March 16, 2016~~February 17, 2017, as amended from time to time, with accompanying Flood Insurance Rate Maps (FIRMs), Digital

Flood Rate Maps (DFIRMs) and Flood Boundary Floodway Maps (FBFMs), and any revisions thereto, are hereby adopted by reference and declared to be a part of this Chapter. These SFHAs identified by the Flood Insurance Study (FIS) and attendant mapping are the minimum area of applicability of this Article and may be supplemented by studies designated and approved by the City. The City Clerk and Floodplain Administrator shall keep a copy of the Flood Insurance Study (FIS), DFIRMs, FIRMs and FBFMs on file and available for public inspection.

(Ord. 13-08 Art. 5)

ARTICLE ~~XXXI~~ V Clearing, Grading and Land Disturbance [Added from Chapter 16, Article XXXI] (PROPOSED AMENDMENTS TO ENTIRE CHAPTER)

Sec. ~~16-31~~15-5-10. Intent.

Sec. ~~16-31~~15-5-20. Permits required.

Sec. ~~16-31~~15-5-30. Permits not required.

Sec. ~~16-31~~15-5-40. Review issues.

Sec. ~~16-31~~15-5-50. Minimum standards.

Sec. ~~16-31~~15-5-60. Submittal requirements.

Sec. ~~16-31~~15-5-70. Submittal process.

Sec. ~~16-31~~15-5-80. Expiration of plan.

Sec. ~~16-31~~15-5-90. Appeals process.

Sec. ~~16-31~~15-5-100. Fees.

Sec. ~~16-31~~15-5-110. Security.

Sec. ~~16-31~~15-5-120. Insurance.

Sec. ~~16-31~~15-5-130. Violations.

Sec. ~~16-31~~15-5-140. Stop Work Order.

Sec. ~~16-31~~15-5-150. Abatement.

Sec. ~~16-31~~15-5-160. Applicability of other laws and regulations.

Sec. ~~16-31~~15-5-10. Intent.

The purpose of this Article is to:

(1) Provide a mechanism for the issuance of permits relating to clearing, grading and earth movement so as to limit soil erosion and sedimentation during and after construction; and

(2) Control nonpoint-source pollution by requiring the implementation of soil erosion and sedimentation control practices for protection of water quality, soil surfaces during and after construction and lands identified as having high open space, visual or vegetative value.

(Ord. 02-01 §3101; Ord. 04-17 §1; Ord. 05-13 §3101)

Sec. ~~16-31~~15-5-20. Permits required.

(a) A grading permit shall be required from the Engineering Division for any of the following uses:

(1) Grading.

(2) Stripping of soil or vegetation.

(3) Depositing fill material.

(4) Trenching or excavating;

(5) Constructing public or private facilities.

(b) For single-family residential development, a permit may be issued upon approval of a preliminary plan by the City Council. However, a permit may be issued upon the approval of the Community Development Director and the ~~City Engineer~~Director of Public Works or his/her designated representative, on a case-by-case basis, prior to approval of a preliminary plan.

(c) For all uses that require an approved Site Improvement Plan, (SIP), a permit may be issued upon approval of the SIP~~, by the City SIP Review Board~~. However, a permit may be issued upon the approval of the Director and the ~~City Engineer~~Director of Public Works or his/her designated representative, on a case-by-case basis, prior to approval of a SIP.

(d) A permit may be issued for construction activities not subject to the platting or site improvement plan review process with the approval of the ~~City Engineer~~Director of Public Works or his/her designated representative, (i.e., road construction, utility lines).

(Ord. 02-01 §3102; Ord. 05-13 §3102)

Sec. ~~16-31~~15-5-30. Permits not required.

(a) Permits are not required for the following uses:

(1) Grading in an area of one (1) acre or less which is isolated and self-contained, when the ~~City Engineer~~Director of Public Works or his/her designated representative determines that such grading will not have a negative impact upon private or public property. When a negative impact is identified, the provisions of this Article shall apply.

(2) An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. Any fill made with the material from such excavation and any excavation having an unsupported height greater than five (5) feet after the completion of such structure shall be required to have a grading permit.

(3) Individual cemetery gravesites.

(4) Routine agricultural uses of agricultural land.

(5) Exploratory excavations of less than five hundred (500) square feet (excluding mining activity) at the direction of a soil engineer or engineering geologist.

(6) A fill less than one (1) foot in depth and placed on natural terrain with a slope flatter than five (5) horizontal feet to one (1) vertical foot (5:1), or less than three (3) feet in depth, not intended to support structures, which does not exceed fifty (50) cubic yards on any one (1) lot and does not obstruct a drainage course.

(b) Even if a permit is not required, any clearing, grading or land disturbance activities shall be in accordance with the standards set forth in the City's duly adopted Storm Drainage Design and Technical Criteria manual and those set forth in this Article.

(Ord. 02-01 §3103; Ord. 05-13 §3103)

Sec. ~~16-31~~15-5-40. Review issues.

Any land-disturbing activity is subject to review by the City and other appropriate agencies regarding:

(1) Significant wildlife habitat.

(2) Archaeological or historical sites.

(3) Lands identified as having high open space, visual or vegetative value.

(4) Geologically sensitive areas.

(5) Riparian or wetland areas.

(6) Unique or distinctive topographic features or other issues as may be identified in the Comprehensive Plan, or Chapter 17 of this Code and other Articles of this Chapter.

(Ord. 02-01 §3104; Ord. 04-17 §1; Ord. 05-13 §3104)

Sec. ~~16-31~~15-5-50. Minimum standards.

All erosion and sediment control plans and specifications for activities which disturb soil or vegetation shall meet, at a minimum, the following criteria:

(1) Plans shall be prepared in accordance with the City's duly adopted Storm Drainage Design and Technical Criteria and Grading, Erosion and Sediment Control Manuals, as amended, and shall be prepared or supervised by a professional engineer licensed in Colorado or a certified professional erosion and sediment control specialist trained and experienced in soil erosion and sedimentation control methods and techniques. ~~Erosion control measures shall be implemented such that the following standards of performance are met:~~

~~a. During overlot grading and during construction, erosion control measures shall be installed such that the maximum amount of sediment discharge by water shall not exceed historic amounts due to a ten-year, twenty-four-hour rainfall event by more than fifteen percent (15%). In addition, the maximum amount of sediment discharge by wind shall not exceed historic amounts by more than fifteen percent (15%).~~

~~b. After construction, erosion control measures shall be installed such that the maximum amount of sediment discharge, either wind-borne or waterborne, shall not exceed historic amounts.~~

~~*Historic sediment discharge* is considered to be the amount of sediment discharged from a basin due to water or wind when the land was established in dryland grass having an average ground cover of sixty-five percent (65%).~~

(2) In addition to the specific performance standards in Paragraph (1) above, all plans shall be prepared and adhered to so that land-disturbing activities shall not:

a. Result in or contribute to soil erosion or sedimentation that would interfere with any existing drainage course in such a manner as to cause damage to any adjacent property;

b. Result in or contribute to deposition of debris or sediment on any private or public property not designed or designated as an area to collect said sediment;

c. Create any hazard to any persons or property; or

d. Detrimentally influence the public welfare or the ~~total~~ development of any watershed.

(3) Technical methodologies to meet the standards set forth in Paragraphs (1) and (2) above are described in the City's duly adopted Storm Drainage Design and Technical Criteria manual.

(Ord. 02-01 §3105; Ord. 04-17 §1; Ord. 05-13 §3105)

Sec. ~~16-31~~15-5-60. Submittal requirements.

Applicants for a grading permit shall submit the appropriate review fees and an erosion and sedimentation control plan to the ~~City Engineer~~Director of Public Works or his/her designated representative which plan shall, at a minimum, contain the information detailed in the City's duly adopted Storm Drainage Design and Technical Criteria and Grading, Erosion and Sediment Control manuals and the following:

(1) A vicinity map, at a maximum scale of 1" = 2,000', indicating the site location, as well as the adjacent properties within five hundred (500) feet of the site boundaries.

(2) A boundary survey or site property lines shown in true location with respect to topographic information.

(3) A plan of the site, at a maximum scale of 1" = 200', on a 24" x 36" sheet showing:

a. Name, address and telephone number of the landowner, developer and petitioner.

b. Existing topography (shown by dashed lines) having maximum contour intervals of two (2) feet, unless otherwise specified by the ~~City Engineer~~Director of Public Works or his/her designated representative.

c. Proposed topography (shown by solid lines) having contour intervals of two (2) feet, unless otherwise specified by the ~~City Engineer~~Director of Public Works or his/her designated representative, including spot elevations.

d. Location of existing structures and natural features, such as stream channels, stands of trees, rock outcroppings, wetlands, historical/archaeological sites, significant wildlife habitats, vegetative stands and potential open space land as identified in the Comprehensive Plan, on the site, adjacent to the site and within one hundred (100) feet of the site boundary line.

e. Location of proposed structures or development on the site, if known.

f. Elevations, including spot elevations if buildings are shown, dimensions, location, extent and slope of all proposed grading, including building and driveway grades.

g. Plans and timing schedule for all temporary or permanent erosion control measures to be constructed with or as a part of the proposed work, including drainage facilities, retaining walls, cribbing and plantings. The timing schedule shall assure that the standards set forth in Section ~~16-31~~15-5-50 above are adhered to from the

commencement of construction. In preparing the site plan, the applicant shall use the soil erodibility zone classifications in the Storm Drainage Design and Technical Criteria manual, the soil classification data for the site identified by the U.S. Soil Conservation Service in the published Soil Survey, or the data which is collected, analyzed and reported upon by a qualified soils engineer registered in the State.

(4) A written report which includes the following:

a. A schedule indicating the anticipated project starting and completion dates, the time of overlot grading, construction phases and completion for vegetative and structural control measures.

b. A statement of the quantity of excavation and fill involved, source of the fill material and the total area of land surface to be disturbed.

c. Estimated itemized and total cost of the required temporary and permanent soil erosion control measures, which estimates shall include quantities and unit costs.

(5) Other information or data as may be required by the ~~City Engineer~~Director of Public Works or his/her designated representative, such as a soil investigation report which shall include, at a minimum, data regarding the nature, distribution and supporting ability of existing soils and rock on the site.

(Ord. 02-01 §3106; Ord. 04-17 §1; Ord. 05-13 §3106)

Sec. ~~16-31~~15-5-70. Submittal process.

(a) All plans shall be submitted to the Engineering Division. Incomplete or otherwise inadequate application submittals shall be returned to the applicant with comments. The applicant shall comply with the provisions of this Article.

(b) The Engineering Division shall review and comment and either accept the plan or return the plan to the applicant within twenty (20) working days from the date the application submittal was determined to be complete. If the Engineering Division cannot review the plan within twenty (20) days, the applicant will be so notified. The Engineering Division and the applicant may mutually agree upon an extension of time for completion of the plan review or for retention of a qualified professional to perform the review. The applicant shall be responsible for all costs associated with the review.

(c) In the event the applicant desires to amend the plan, an amended plan which complies with the requirements set forth in Sections ~~16-31~~15-5-50 and ~~16-31~~15-5-60 above shall be submitted by the applicant and reviewed by the Engineering Division prior to the commencement of any work pursuant to the amended plan.

(Ord. 02-01 §3107; Ord. 05-13 §3107)

Sec. ~~16-31~~15-5-80. Expiration of ~~plan~~permit.

A permit shall be effective for twelve (12) consecutive months from the date of issue. Prior to the expiration date, the permit may be renewed upon approval by the ~~City Engineer~~Director of Public Works or his/her designated representative for a period of time not to exceed twelve (12) months. Two additional extensions of six months per extension may be granted by the Director of Public Works or his/her designated representative. Any further extensions may require the applicant to request City Council approval.

(Ord. 02-01 §3108; Ord. 05-13 §3108)

Sec. ~~16-31~~15-5-90. Appeals process.

If the applicant disagrees with the decision of the Engineering Division, the applicant may appeal to the City Council. The appeal shall be based on technical data or other relevant information. The ~~Planning Commission~~City Council may affirm, modify or reverse the findings, conclusions and decision of the Engineering Division or remand the decision to the Engineering Division for further review and findings.

(Ord. 02-01 §3109; Ord. 05-13 §3109)

Sec. ~~16-31~~15-5-100. Fees.

(a) A nonrefundable filing fee shall be paid to the Engineering Division at the time of application. ~~Fees are specified in the Engineering Division User Fee Manual.~~

(b) Any person, corporation, partnership, firm or other entity applying for a grading permit after commencement or completion of the activities authorized in said permit shall be required to pay double the standard fee.

(Ord. 02-01 §3110; Ord. 05-13 §3110)

Sec. ~~16-31~~15-5-110. Security.

(a) To ensure rehabilitation of the disturbed area, the applicant shall furnish a letter of credit or other form of security acceptable to the City, naming the City as the secured party in an amount and type to be determined by the ~~City Engineer~~Director of Public Works or his/her designated representative based upon the magnitude of the land-disturbing activities and rehabilitation requirements. The amount of security will be one hundred fifteen percent (115%) of the cost estimate set forth in Section ~~16-31~~15-5-60(4) or one hundred fifteen percent (115%) of the cost to vegetate the disturbed land to dryland grasses based upon unit costs determined by the ~~City Engineer~~Director of Public Works or his/her designated representative, whichever is greater. Due to the complexities of erosion control, in no instance shall the amount of security be less than two thousand five hundred dollars ($2,500.00), except as provided in Paragraph ~~16-31~~15-5-30(a)(1). The ~~City Engineer~~Director of Public Works or his/her designated representative shall have the right to call on the security in the event the schedules required in Subparagraphs ~~16-31~~15-5-60(3)g and ~~16-31~~15-5-60(4)a are not met.

(b) No erosion and sedimentation control ~~plans~~ permit(s) will be approved without the submittal of the required security.

(c) The City will accept a cash escrow or letter of credit as security. The cash escrow or letter of credit will be returned to the applicant within sixty (60) days after the completion of the land-disturbing activity and closure of the permit. Completion shall mean the achievement of the final stabilization of the land as indicated on the erosion and sedimentation control plan. Completion shall be determined by a representative of the ~~City Engineer~~Director of Public Works or his/her designated representative who shall notify the applicant in writing. The warranty period for erosion control construction shall be two (2) growing seasons.

(d) Prior to final release, the Director of Public Works or his/her representative may grant a reduction of the security.

(Ord. 02-01 §3111; Ord. 04-17 §1; Ord. 05-13 §3111)

Sec. ~~16-31~~15-5-120. Insurance.

Every applicant, before commencing operations, shall be insured to the extent of two hundred thousand dollars ($200,000.00) per person, five hundred thousand dollars ($500,000.00) per occurrence, against liability arising from activities or operations conducted or carried on pursuant to any of the provisions of this Chapter, and such insurance shall be kept in full force and effect during the period of such activities or operations, including site rehabilitation. A certificate indicating protection by such insurance shall be filed by the applicant together with his or her application for permit. Said insurance shall not be released until final inspection and approval has been completed by the Engineering Division.

(Ord. 02-01 §3112; Ord. 05-13 §3112)

Sec. ~~16-31~~15-5-130. Violations.

(a) Any person, corporation, partnership, firm or other entity of whatever description violating any provision of these regulations shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not more than one ~~hundred~~ thousand dollars ($1,000.00), or by imprisonment for not more than ten (10) days, or by both such fine and imprisonment. Each day during which a violation exists shall constitute, and shall be punishable as, a separate offense.

(b) This Article may be enforced by injunction, including both the enjoining of actions or inactions in violation of this Article (i.e., land-disturbing activities undertaken without, or in violation of the terms of, a permit as required herein), and a mandatory injunction to require the removal of excavation or fill accomplished without, or in violation of the terms of, such a permit. In any such injunctive action, the City shall be entitled to an award of its costs of suit and any costs incurred in the removal of fill and/or restoration of areas where fill or excavation activities have been undertaken in violation of the provisions of this Article.

(c) The City shall be entitled to recover its attorney's fees incurred in bringing any action to compel compliance with the provisions of these regulations or to compel compliance with any plan approved hereunder.

(Ord. 02-01 §3113; Ord. 05-13 §3113)

Sec. ~~16-31~~15-5-140. Stop Work Order.

The ~~City Engineer~~Director of Public Works or his/her designated representative is authorized to order work stopped on any project which disturbs the land and which is not in compliance with the provisions of this Article.

(Ord. 02-01 §3114; Ord. 05-13 §3114)

Sec. ~~16-31~~15-5-150. Abatement.

(a) In the event a landowner determines or discovers that a plan is not being adhered to, said landowner shall take immediate steps to abate said violation and shall notify the ~~City Engineer~~Director of Public Works or his/her designated representative of the deviation from the plan and the efforts undertaken to bring the work into compliance with said plan. ~~The~~

~~landowner shall be granted a period of five (5) calendar days from the date of discovery of said deviation to bring the work into compliance with the plan.~~

(b) In the event the ~~City Engineer~~Director of Public Works or his/her designated representative discovers a deviation from the plan, the landowner or authorized representative shall be notified in writing of said deviation and shall be required to bring the work into compliance with the plan~~ within no more than five (5) calendar days from the date of notification~~. The written notice shall specify the areas of deviation from the plan. Failure to correct the deviation from the plan within the time period provided in the notice shall entitle the City to invoke the provisions of Section ~~16-31~~15-5-130 above.

(Ord. 02-01 §3115; Ord. 05-13 §3115)

Sec. ~~16-31~~15-5-160. Applicability of other laws and regulations.

Nothing contained herein relieves any person, corporation, firm or entity from the obligation to comply with any applicable state or federal laws or regulations relating to water quality or water quality standards or any other standards contained within this Chapter. Ord. 02-01 §3116; Ord. 05-13 §3116)

CHAPTER 16 Zoning

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Sec. 16-2-110. ~~Building~~ Use and structure restrictions.

(a) ~~It shall be unlawful to erect, construct, reconstruct, alter or change the use of any building or other structure, including surface and subsurface structures, or to move a structure from one property to another within the incorporated area of the City without first obtaining a building permit from the Building Division. The plans, submitted with the building permit application, for the proposed erection, construction, reconstruction, alteration or use shall conform to all applicable provisions of this Chapter and shall be constructed in accordance with the City's duly adopted or authorized Building Code.~~ No structure shall be altered, built or moved, and no structure or land shall be used or occupied, which does not conform to all applicable provisions of this Chapter in which the structure or land is located.

(b) No structure ~~requiring a building permit may~~ shall be erected, placed upon or extended over any easement unless approved in writing by the agency or agencies having jurisdiction over such easement. A copy of such approval shall be submitted to the ~~Building Division~~ Community Development Department prior to building permit issuance.

(c) (c) ~~It shall be unlawful to construct, build, establish or continue to maintain any building, tree, smokestack, chimney, flagpole, wires, tower or other structure or appurtenance thereto which may constitute a hazard or obstruction to the safe navigation, landing and takeoff of aircraft at a publicly used airport under the regulation of the United State Civil Aeronautics Authority.~~ **Applicants are responsible for providing any prior required notice to the Federal Aviation Administration (FAA) of the proposed construction or alteration of a structure that may constitute an obstruction to the safe navigation, landing, or takeoff of aircraft at a publicly used airport, as required by regulations at 14 C.F.R. Part 77. Copies of all written communications with and final determinations by the FAA shall be submitted to the Planning Division prior to approval of a Site Improvement Plan (SIP) application. Upon the issuance by the FAA of a Determination of No Hazard to Air Navigation which includes mitigation measures, the mitigation measures recommended by the FAA may be required. Upon the issuance by the FAA of a Determination of Hazard to Air Navigation, the SIP application shall be denied.**

Sec. 16-2-210. Property maintenance.

The following provisions apply to all properties except single-family detached:

(1) All improvements on the property shall be maintained in a state of good repair consistent with the approved SIP. This includes proper upkeep and maintenance of all structures, paved surfaces, access, parking areas, lighting, signage and similar improvements.

(2) Landscaping shall be maintained in a neat, clean and healthy condition. This shall include proper pruning, mowing of lawns, weeding, fertilizing, mulching, trimming, removal of litter and regular irrigation of all plantings, as applicable. Should any plant material die or its condition be deteriorated significantly as determined by staff, the owner shall be responsible for the replacement of the plant(s) within one (1) planting season. Dead plant materials shall be removed and replaced with healthy planting materials of comparable size and species as shown on the SIP, and shall meet the original intent of the approved landscape design. Undeveloped properties eligible for a Site Improvement Plan must also be maintained in a state of good repair. This includes regular mowing, weeding, mud and erosion control, as well as trash removal. Clear space above public walks shall be seven (7) feet or greater.

(3) Sidewalks and landscaping in the public right-of-way adjacent to commercial, multi-family or single-family attached properties are the responsibility of the adjoining property owner or managing entity. Sidewalks must be maintained in a condition free from snow or ice within twenty-four (24) hours after its accumulation.

(4) Maintenance access shall be provided to all storm drainage facilities to ensure continuous operational capability of the system. The property owner shall be responsible for the maintenance of all drainage facilities, including inlets, pipes, culverts, channels, ditches, hydraulic structures and detention basins located on the property, unless such maintenance responsibility is provided by an alternate entity, with City approval, through a separate written agreement with a copy on file with the ~~City Engineer~~Director of Public Works or his/her designated representative. If the City determines that the property is not in compliance with the above requirements, it may contact the owner to remedy the violations within a timeframe specified by the Director. If the owner fails to remedy the violation in the time specified, the City shall have the right to enter the land for the purposes of operations and maintenance. All such maintenance costs shall be assessed to the property owner.

Sec. 16-2-230. Rain Barrels.

The City promotes the benefits of the use of rain barrels while recognizing the need to blend their use into a residential setting. To balance the environmental, drainage and other benefits of rain barrels with the potential for nuisance, aesthetic or other issues that may result from the

use of the same, precipitation from a rooftop that is collected in a rain barrel is permitted subject to the following:

(1) A rain barrel collecting precipitation from a downspout is allowed adjacent to any building façade, when the rain barrel is:
    (a) Fifty-five (55) gallons or less in capacity;
    (b) Blends with the building's façade and surrounding landscaping and vegetation;
    (c) Outdoors, above ground, not elevated more than 24 inches above adjacent grade, placed on a stable surface, and maintained in such a way as to prevent tipping;
    (d) Secured with a sealable lid;
    (e) Maintained in a safe and functional condition and kept in good repair;
    (f) Maintained to prevent any offensive odors, any mosquito or other insect eggs and larvae, any other nuisance or any other City code violation; and
    (g) Has associated permanent or temporary piping that reasonably blends in with surrounding landscaping and vegetation.
(2) Shall meet all provisions of the State laws, including:
    (a) Collection is from a rooftop of a building that is used primarily as a single-family residence (defined as a separate building or an individual residence that is part of a row of residences joined by common sidewalls) or a multi-family residence with four or fewer units;
    (b) The collected precipitation is used on the property on which it is collected;
    (c) No more than two rain barrels, with a total of one hundred ten (110) gallons of storage, are allowed per residence;
    (d) The collected precipitation is used solely for outdoor purposes including the irrigation of lawns and gardens;
    (e) Precipitation collected shall not be used for drinking water or indoor household purposes.

ARTICLE XXII - Temporary Structures

Sec. 16-22-10. Intent.

Sec. 16-22-20. General requirements.

Sec. 16-22-30. Temporary permit process.

Sec. 16-22-40. Temporary construction office. (AMENDMENTS PROPOSED)

Sec. 16-22-50. Temporary residential sales office.

Sec. 16-22-60. Temporary nonresidential office.

Sec. 16-22-70. Temporary commercial structures.

Sec. 16-22-40. Temporary construction office.

A temporary structure for the storage of construction materials and a construction office to be used for managing a construction job shall be allowed in all districts, provided that:

(1) A building permit has been issued for a permanent structure, or, in the case of a road construction project, approval has been granted by the ~~City Engineer~~Director of Public Works or his/her designated representative.

(2) The structure is used only during normal construction hours by the construction employees. The structure shall not be used for living quarters.

(3) The structure is located within the area of a recorded plat or an approved Site Improvement Plan.

(4) A permit for a temporary electrical meter has been issued by the Building Division.

(5) The temporary structure shall be removed upon issuance of a certificate of occupancy or completion of the permanent structure.

ARTICLE XXII - A Temporary Uses

Sec. 16-22A-10. Intent.

Sec. 16-22A-20. General requirements.

Sec. 16-22A-30. Markets, festivals and fairs; specific requirements.

Sec. 16-22A-40. Grand openings, anniversary celebrations and other special occasions; specific requirements.

Sec. 16-22A-50. Christmas tree sales lot; specific requirements.

Sec. 16-22A-60. Fruit and vegetable stands; specific requirements.

Sec. 16-22A-70. Outdoor sales and promotions; specific requirements.

Sec. 16-22A-80. Temporary Use Permit; permitting procedure. (AMENDMENTS PROPOSED)

Sec. 16-22A-90. Grounds for denial of permit.

Sec. 16-22A-100. Temporary Use Permit; submittal requirements.

Sec. 16-22A-80. Temporary Use Permit; permitting procedure.

(a) The applicant shall submit the application fee and the information required in Section 16-22A-100 of this Article to the Community Development Department.

(b) The submittal shall be reviewed for completeness and the applicant notified of any inadequacies. Once the submittal is determined complete, the Community Development Department and other agencies such as the ~~City Engineer~~Director of Public Works or his/her designated representative~~ing Division~~, the affected fire district and the health department may be asked to review the application.

(c) After review by applicable departments and referral agencies, the Community Development Department shall approve, approve with conditions, or deny the Temporary Use Permit.

(d) Denial of the Temporary Use Permit may be appealed to the City Council, in writing, within ten (10) days of denial by the Community Development Department.

ARTICLE XXVII – Site Improvement Plan (SIP)

Sec. 16-27-10. Intent.

Sec. 16-27-20. Applicability.

Sec. 16-27-30. Variances.

Sec. 16-27-40. Design guidelines.

Sec. 16-27-50. General submittal requirements.

Sec. 16-27-60. Narrative submittal requirements.

Sec. 16-27-70. SIP submittal requirements. (AMENDMENTS PROPOSED)

Sec. 16-27-80. Review process. (AMENDMENTS PROPOSED)

Sec. 16-27-90. Approval provisions. (AMENDMENTS PROPOSED)

Sec. 16-27-100. Post-approval submittal and review process. (AMENDMENTS PROPOSED)

Sec. 16-27-110. SIP amendments. (AMENDMENTS PROPOSED)

Sec. 16-27-70. SIP submittal requirements.

(b) Cover Sheet.

(1) Notes or requirements specific to the SIP shall be provided on Sheet 1. Included on all SIPs shall be the following note:

"The property herein is subject to all applicable requirements of the Lone Tree Zoning Code, including but not limited to maintenance, lighting, parking, signage, and outdoor storage, except as may otherwise be addressed in an approved Development Plan or Sub-Area Plan."

(2) A vicinity map at a scale of 1" = 2,000' shall be provided showing the relationship of the site to the surrounding area within a two-mile radius superimposed on a current map of the City that shows streets and lots, keeping the same scale. If the site is within a Planned Development, a filing or Planned Development map at 1" = 1,000' for a one-mile radius shall also be included.

(3) The following approval signature block shall be placed on Sheet 1 of the SIP plan:

APPROVAL CERTIFICATE

THIS SIP HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORD WITH CITY REGULATIONS, AS APPROVED BY THE CITY ON (DATE).

By: _____

Name: _____
Title: Community Development Director

Date: _____

By: _____

Name: _____
Title: ~~City Engineer~~Director of Public Works or his/her designated representative

Date: _____

By: _____

Name: _____
Title: Mayor

Date: _____

The owner(s) of the lands described herein, hereby agree(s) (1) to develop and maintain the property described hereon in accordance with this approved Site Improvement Plan and in compliance with Chapter 16 of the Lone Tree Municipal Code and that (2) the heirs, successors and assigns of the owner(s) shall also be bound. The signatures of the owner(s)'(s) representative(s) below indicate that any required authorizations to enter this agreement, including any corporate authorizations, have been obtained.

_____
(Name of Owner)

_____
(Signature of Owner)

_____
(Printed Name and Title)

State of _____)

) ss.

County of _____)

Subscribed and sworn to before me this _____ day of _____, 20___, by _____

Witness my hand and official seal.

My commission expires: _____

_____
Notary Public

Approval by the City of Lone Tree does not signify that the requirements of the Americans with Disabilities Act (ADA) have been satisfied. The applicant is responsible to ensure that said ADA requirements have been met.

(e) Irrigation Plan. The irrigation plan shall be prepared consistent with the standards set forth in Section 16-32-110 of this Chapter. The irrigation plan shall be prepared at a scale of 1" = 40' or 1" = 20' or another scale approved by staff, which allows for maximum clarity of the proposal. Additionally, the irrigation plans shall be the same scale as the landscaping plans. The ~~landscape~~ irrigation plan shall contain the following:

(1) The type of irrigation proposed for each hydrozone based on exposure, plant selection and slope. To conserve on water, irrigated turf shall not be allowed on slopes greater than 3:1. Shrubs or trees irrigated with a drip line are acceptable as is drought-tolerant grasses with temporary irrigation systems for areas with slope greater than 3:1.

(2) The location of the backflow preventer(s).

(3) The location of the master valve.

(4) The location and type of weather-based smart controller(s).

(5) The location of the rain sensor that will override the irrigation cycle of the sprinkler.

~~(6) In chart form, the symbol, manufacture model number, description and installation details for all proposed irrigation equipment.~~

Sec. 16-27-80. Review process.

(a) Presubmittal meeting. Prior to submittal of the SIP, the applicant shall communicate with the Community Development Department staff to discuss the procedures and submittal requirements and ensure the project is in conformance with the Comprehensive Plan, this Chapter, the Subdivision Regulations, the Design Guidelines and applicable Planned Developments and Sub-Area Plans.

(b) Submittal to the Community Development Department. The applicant shall submit to the Community Development Department all information and fees in accordance with the submittal requirements in Subsection 16-27-50(a) of this Article. The submittal to the Community Development Department shall be reviewed for general completeness within fifteen (15) working days after such submittal. The applicant shall be notified of any inadequacies. An incomplete or poorly prepared submittal may not be processed.

(c) Submittal to the Engineering Division. In addition to the Community Development Department submittal, the applicant shall submit to the Engineering Division all information and fees in accordance with the submittal requirements in Subsection 16-27-50(b) of this Article.

(d) Referral review.

(1) When staff has determined the submittal to be complete, the applicant will be notified to submit to staff an electronic file, such as a PDF or other file format approved by staff, and any additional hard copies. Staff will distribute plans to referral agencies. Any revised plans shall be provided by the applicant, as required by staff.

(2) The referral period shall be thirty-five (35) days; however, such period may be reduced by staff.

(3) All referral comments received in writing from residents or homeowners' associations shall be forwarded in the packet to the Planning Commission and City Council. Other written referral agency comments that expand upon technical or standard comments, or have not otherwise been addressed through the review process, may be forwarded to the Planning Commission and City Council, as determined by staff.

(e) Planning Commission review.

(1) Following submittal of the revised SIP based on staff and referral comments, staff shall schedule a public meeting before the Planning Commission, providing notice of such meeting to the applicant. Staff will prepare a staff report for consideration by the Planning Commission. The report shall include staff findings and a recommendation for SIP approval, approval with conditions or denial, based upon conformance with the approval standards stated herein.

(2) At the scheduled meeting, the Planning Commission shall consider the SIP and shall recommend its approval, approval with conditions or denial, based upon conformance with the approval standards stated herein. The Planning Commission may continue the SIP to a subsequent meeting if it feels additional information is necessary in order to render a recommendation.

(f) City Council review. Staff shall schedule a public meeting at which the City Council shall consider the SIP for approval and provide notice of such meeting to the applicant.

(1) The recommendations of the staff and the Planning Commission concerning the SIP shall be forwarded to the City Council for final action. At the scheduled meeting the City Council shall consider the SIP and shall approve, approve with conditions or deny the application, based upon conformance with the approval standards stated herein. The City Council may continue the SIP to a subsequent meeting if it feels additional information is necessary in order to render a decision.

(2) The City Council may, at its discretion at a public meeting, set a City Council public meeting date for an SIP application which has been continued by the Planning Commission for City Council consideration, with or without Planning Commission recommendation.

(3) If the SIP is denied by the City Council, the submittal of a new application and processing fee shall be required in order to pursue a new SIP. A resubmittal of the same or substantially similar request, as determined by the Director, shall not be accepted within one (1) year of such denial.

(g) Inactive SIPs. SIP applications (not yet approved) shall be deemed inactive and void if the applicant has failed to submit additional information for a period of more than one hundred eighty (180) days. The resubmittal of a new application and fees shall be required to pursue the SIP request. The Director may grant no more than one (1) extension of time, of no more than one hundred eighty (180) days, upon a written request by the applicant.

(h) Review of building permit applications concurrent with SIP review. For nonresidential, single-family attached or multi-family structures, a building permit shall be issued only when an SIP has been approved. However, with the approval of the Director, an applicant may submit a building permit application to the Building Division concurrent with the SIP application, at which point the permit may be issued upon SIP approval by the City Council. Building permits shall not be issued for any development that is not in conformance with the approved SIP. Approval of construction drawings by the ~~City Engineer~~Director of Public Works or his/her

designated representative and by any relevant service providers, e.g., utilities or special districts, may be required prior to issuance of building permits.

Sec. 16-27-90. Approval provisions.

(a) Approval standards. SIPs must be in conformance with the Comprehensive Plan, the Design Guidelines, applicable chapters of this Code and applicable Planned Developments and Sub-Area Plans, as well as all applicable roadway, grading, drainage and erosion control standards.

(b) Approval period/effective date.

(1) The SIP shall be effective for a period of three (3) years from the date of approval, unless stated otherwise in such approval. Building permits shall not be issued after three (3) years of SIP approval if it is determined by the Director that updated regulations or changing conditions warrant a new submittal. For multi-phased plans, building permits shall not be issued more than three (3) years from the date of Phase I approval when it is determined by the Director that updated regulations or changing conditions warrant a new submittal.

(2) The Director may grant one (1) extension, of not more than six (6) months, upon a written request by the applicant prior to the expiration of the SIP. The Director shall determine if updated City regulations or standards shall apply and whether a reinstatement of the expired SIP will be processed administratively or involve review by the Planning Commission and/or City Council.

(c) Building permit approval. Prior to issuance of a building permit, final approval from the Community Development Department and ~~City Engineer~~Director of Public Works or his/her designated representative is required for final SIP approval. Engineering approval may be contingent upon approval of a Grading, Erosion and Sediment Control (GESC) Report and Plan(s); a Drainage Report or Drainage Conformance Letter; Civil Site Development construction plan(s); and/or a Site Improvement Plan Improvements Agreement (SIPIA), as applicable. Submittal of the finally-approved SIP Mylars to the Community Development Department, signed by the applicant, shall be required prior to the issuance of a building permit.

(d) Certificates of Occupancy. When the construction of all buildings and all site improvements has been completed in accordance with the approved SIP, building permit and approved civil site engineering construction plans, a Certificate of Occupancy (CO) may be issued subject to review and approval by the Building Official or designee.

(e) Temporary Certificates of Occupancy.

(1) Temporary occupancy may be granted by a Temporary Certificate of Occupancy (TCO) with site improvements subsequently being completed within the timeframe established in the TCO subject to review and approval by the Building Official or designee. A TCO agreement, signed by the applicant, shall be submitted to the City in a form approved by the Director. The Director may, for good cause shown, grant no more than one (1) extension of not more than six (6) months upon a written request by the applicant prior to the expiration of the TCO.

(2) A TCO may be issued provided that financial security such as an irrevocable letter of credit, a cashier's check or some other City-approved form of payment has been submitted and accepted by the City. This financial security shall be in an amount equal to the cost of the unfinished work plus fifteen percent (15%), and shall be submitted prior

to the issuance of a TCO. The financial security will be held by the City and released or reimbursed when the work is deemed complete by the Director and ~~City Engineer~~Director of Public Works or his/her designated representative.

Sec. 16-27-100. Post-approval submittal and review process.

(a) Proof sets. Upon City approval of the SIP, the applicant shall prepare and submit two (2) proof sets of the SIP for submittal to the Community Development Department, reflecting all conditions and changes to the plan as required by the City.

(b) Final SIP. Once the SIP is deemed satisfactory, staff will authorize preparation and submittal of the final SIP of record to the City. This shall include:

(1) One (1) Mylar set of the SIP (24" x 36") prepared and submitted in accordance with the following:

a. The Mylar SIP shall be prepared on 24" x 36" flat, spliceless, tapeless and creaseless sheets of double matte Mylar film with a uniform thickness of not less than three-thousandths (.003) of an inch. The Mylar should be Right Reading [i.e., plotted or photomylar with the drawing on the front) of an original drawing, using only permanent black ink that will adhere to drafting films (no ballpoint, transfer type or sticky backs are permitted), or an acceptable photographic reproduction or computer-generated reproduction of the original drawing. Inaccurate, incomplete or poorly drawn plans, as well as Diazo (sepia) or electrostatic-generated (photocopied) plans shall be rejected.

b. The Mylar shall be submitted with the notarized signature of the landowner and any lenders as applicable, as noted by the Certification Block (see Paragraph 16-27-70(b)(3) of this Article). Unsigned Mylars will not be accepted.

c. A revised material sample board, if changes were approved during the review process. The applicant is responsible for preparing and keeping a duplicate of the approved material sample board for use in the field.

(c) Financial security and SIPIA.

(1) A Site Improvement Plan Improvements Agreement (SIPIA) and associated surety(ies) may be required in order to guarantee the completion of site improvements and shall specify the nature and timing of the work to be completed. An SIPIA will be required whenever any improvements on or associated with the site are within the public right-of-way or are (or may become) the City's to maintain, and in other circumstances as determined by Public Works.

(2) In order to quantify the required amount of financial security for the required improvements, the City may require the applicant to provide, at no cost to the City, up to three (3) bids from qualified contractors for the applicable required improvements. Alternatively, the City may accept detailed construction cost estimates prepared by and signed/sealed by the applicant's Professional Engineer and/or Professional Landscape Architect (as applicable based on the work covered by the SIPIA). Based on these quotes and/or estimates, the Director and the ~~City Engineer~~Director of Public Works or his/her designated representative shall determine the amount of security required.

(3) Except for force majeure causes, failure by the applicant to complete the work or to request a time extension within the specified time period may result in a forfeiture of the security and may cause the City to initiate the construction of such improvements, as

detailed in the SIPIA. Except for force majeure causes, the Director may grant no more than two (2) time extensions of not more than six (6) months each upon receipt of a written request, accompanied by an extension of the financial security. A separate request must be submitted for each requested extension, and such request must be submitted prior to the date the construction was to have been completed.

(d) Inspection of the constructed SIP. Staff inspection of building design, materials and colors, landscaping, grading, drainage and erosion control is required prior to issuance of a Certificate of Occupancy. At the early stages of final exterior building material and color application, the applicant is responsible for contacting staff to schedule on-site inspections. The applicant is strongly encouraged to provide a sample mock-up of a representative portion of the building to expedite the inspection process and ensure compliance with the approved plans and material sample board.

Sec. 16-27-110. SIP amendments.

(c) Additional conditions applied to minor and major amendments.

(1) All amendments must meet the intent of the SIP requirements and the Design Guidelines.

(2) A change in land use does not necessarily require an amendment to the SIP as long as the new use is a use by right in the underlying zone district.

(3) Elements not specifically addressed in the table in Subsection (b) above, such as minor changes to the traffic circulation or drainage, may be considered for administrative amendments upon approval by the City Manager, and when applicable (e.g., for engineering-related items) the ~~City Engineer~~Director of Public Works or his/her designated representative.

(4) All applications will be sent to the appropriate referral agencies for comment.

(5) The Director/City Manager reserves the right to forward any application to the Planning Commission and shall forward any application deemed major to the City Council for approval.

(6) If a variance has been granted previously for a specific application, the request may be reviewed by the Planning Commission, as required by the Director.

(7) A "change in architectural character" warranting Planning Commission review includes:

a. Multiple changes to an SIP. Even in cases where no single change exceeds the threshold requiring Planning Commission review, staff will consider the cumulative effect of all the changes.

b. Significant changes to the "skin" or materials used to surface a building, e.g., greater than twenty percent (20%) of the surface area.

c. Significant changes to the color of the building materials.

d. Significant changes in the lines of the architecture, such as significant modification of rooflines.

ARTICLE XXVIII - Parking Standards

Sec. 16-28-10. Intent.

Sec. 16-28-15. Applicability.

Sec. 16-28-20. General provisions.

Sec. 16-28-30. Parking plan requirements.

Sec. 16-28-40. Design standards for parking spaces.

Sec. 16-28-50. Design standards for parking areas. (AMENDMENTS PROPOSED)

Sec. 16-28-55. Maximum parking requirements.

Sec. 16-28-60. Minimum requirements for off-street parking; general provisions.

Sec. 16-28-70. Requirements for off-street parking; specific use.

Sec. 16-28-80. Bicycle parking.

Sec. 16-28-50. Design standards for parking areas.

(a) Access. Each required off-street parking area shall have adequate access to a public street or other thoroughfare. Alleys, where they are utilized, shall only be used as secondary means of access to a lot or parcel.

(b) Off-street loading area. Loading areas shall be provided as required and shall not be used to supply off-street parking spaces. The loading area shall not occupy or intrude into any fire lane and shall not be located in setback areas.

(c) Marking traffic flow. Parking which is designed for one-way traffic should be clearly indicated as such by the use of a sign and/or arrow designating the direction of traffic flow.

(d) Grading. All off-street parking areas shall be properly graded. The ~~City Engineer~~Director of Public Works or his/her designated representative must approve the drainage and stormwater detention design.

(e) Surfacing. Each off-street parking area shall be surfaced with asphalt, Portland cement concrete or some other material approved by the ~~City Engineer~~Director of Public Works or his/her designated representative.

(f) Wheel stops. Wheel stops may be required in parking lots to prevent cars from impacting adjacent landscaping, fencing or walkways.

(g) Landscaping. See Section 16-32-70 of this Chapter for landscape requirements for parking lots.

ARTICLE XXXI – MOVED TO CHAPTER 15, ARTICLE ~~Clearing, Grading and Land Disturbance~~

~~Sec. 16-31-10. Intent.~~

~~Sec. 16-31-20. Permits required.~~

~~Sec. 16-31-30. Permits not required.~~

~~Sec. 16-31-40. Review issues.~~

~~Sec. 16-31-50. Minimum standards.~~

~~Sec. 16-31-60. Submittal requirements.~~

~~Sec. 16-31-70. Submittal process.~~

~~Sec. 16-31-80. Expiration of plan.~~

~~Sec. 16-31-90. Appeals process.~~

~~Sec. 16-31-100. Fees.~~

~~Sec. 16-31-110. Security.~~

~~Sec. 16-31-120. Insurance.~~

~~Sec. 16-31-130. Violations.~~

~~Sec. 16-31-140. Stop Work Order.~~

~~Sec. 16-31-150. Abatement.~~

~~Sec. 16-31-160. Applicability of other laws and regulations.~~

~~Sec. 16-31-10. Intent.~~

~~The purpose of this Article is to:~~

~~(1) Provide a mechanism for the issuance of permits relating to clearing, grading and earth movement so as to limit soil erosion and sedimentation during and after construction; and~~

~~(2) Control nonpoint-source pollution by requiring the implementation of soil erosion and sedimentation control practices for protection of water quality, soil surfaces during and after construction and lands identified as having high open space, visual or vegetative value.~~

~~(Ord. 02-01 §3101; Ord. 04-17 §1; Ord. 05-13 §3101)~~

~~Sec. 16-31-20. Permits required.~~

~~(a) A grading permit shall be required from the Engineering Division for any of the following uses:~~

~~(1) Grading.~~

~~(2) Stripping of soil or vegetation.~~

~~(3) Depositing fill material.~~

~~(4) Trenching or excavating;~~

~~(5) Constructing public or private facilities.~~

~~(b) For single-family residential development, a permit may be issued upon approval of a preliminary plan by the City Council. However, a permit may be issued upon the approval of the Director and the City Engineer, on a case-by-case basis, prior to approval of a preliminary plan.~~

~~(c) For all uses that require an approved Site Improvement Plan, (SIP), a permit may be issued upon approval of the SIP, by the City SIP Review Board. However, a permit may be issued~~

~~upon the approval of the Director and the City Engineer, on a case-by-case basis, prior to approval of a SIP.~~

~~(d) A permit may be issued for construction activities not subject to the platting or site improvement plan review process with the approval of the City Engineer, (i.e., road construction, utility lines).~~

~~(Ord. 02-01 §3102; Ord. 05-13 §3102)~~

~~Sec. 16-31-30. Permits not required.~~

~~(a) Permits are not required for the following uses:~~

~~(1) Grading in an area of one (1) acre or less which is isolated and self-contained, when the City Engineer determines that such grading will not have a negative impact upon private or public property. When a negative impact is identified, the provisions of this Article shall apply.~~

~~(2) An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. Any fill made with the material from such excavation and any excavation having an unsupported height greater than five (5) feet after the completion of such structure shall be required to have a grading permit.~~

~~(3) Individual cemetery gravesites.~~

~~(4) Routine agricultural uses of agricultural land.~~

~~(5) Exploratory excavations of less than five hundred (500) square feet (excluding mining activity) at the direction of a soil engineer or engineering geologist.~~

~~(6) A fill less than one (1) foot in depth and placed on natural terrain with a slope flatter than five (5) horizontal feet to one (1) vertical foot (5:1), or less than three (3) feet in depth, not intended to support structures, which does not exceed fifty (50) cubic yards on any one (1) lot and does not obstruct a drainage course.~~

~~(b) Even if a permit is not required, any clearing, grading or land disturbance activities shall be in accordance with the standards set forth in the City's duly adopted Storm Drainage Design and Technical Criteria manual and those set forth in this Article.~~

~~(Ord. 02-01 §3103; Ord. 05-13 §3103)~~

~~Sec. 16-31-40. Review issues.~~

~~Any land-disturbing activity is subject to review by the City and other appropriate agencies regarding:~~

~~(1) Significant wildlife habitat.~~

~~(2) Archaeological or historical sites.~~

~~(3) Lands identified as having high open space, visual or vegetative value.~~

~~(4) Geologically sensitive areas.~~

~~(5) Riparian or wetland areas.~~

(6) Unique or distinctive topographic features or other issues as may be identified in the Comprehensive Plan, or Chapter 17 of this Code and other Articles of this Chapter.

(Ord. 02-01 §3104; Ord. 04-17 §1; Ord. 05-13 §3104)

Sec. 16-31-50. Minimum standards.

All erosion and sediment control plans and specifications for activities which disturb soil or vegetation shall meet, at a minimum, the following criteria:

(1) Plans shall be prepared in accordance with the City's duly adopted Storm Drainage Design and Technical Criteria, as amended, and shall be prepared or supervised by a professional engineer licensed in Colorado or a certified professional erosion and sediment control specialist trained and experienced in soil erosion and sedimentation control methods and techniques. Erosion control measures shall be implemented such that the following standards of performance are met:

a. During overlot grading and during construction, erosion control measures shall be installed such that the maximum amount of sediment discharge by water shall not exceed historic amounts due to a ten-year, twenty-four-hour rainfall event by more than fifteen percent (15%). In addition, the maximum amount of sediment discharge by wind shall not exceed historic amounts by more than fifteen percent (15%).

b. After construction, erosion control measures shall be installed such that the maximum amount of sediment discharge, either wind-borne or waterborne, shall not exceed historic amounts.

Historic sediment discharge is considered to be the amount of sediment discharged from a basin due to water or wind when the land was established in dryland grass having an average ground cover of sixty-five percent (65%).

(2) In addition to the specific performance standards in Paragraph (1) above, all plans shall be prepared and adhered to so that land-disturbing activities shall not:

a. Result in or contribute to soil erosion or sedimentation that would interfere with any existing drainage course in such a manner as to cause damage to any adjacent property;

b. Result in or contribute to deposition of debris or sediment on any private or public property not designed or designated as an area to collect said sediment;

c. Create any hazard to any persons or property; or

d. Detrimentally influence the public welfare or the total development of any watershed.

(3) Technical methodologies to meet the standards set forth in Paragraphs (1) and (2) above are described in the City's duly adopted Storm Drainage Design and Technical Criteria manual.

(Ord. 02-01 §3105; Ord. 04-17 §1; Ord. 05-13 §3105)

Sec. 16-31-60. Submittal requirements.

Applicants for a grading permit shall submit the appropriate review fees and an erosion and sedimentation control plan to the City Engineer which plan shall, at a minimum, contain the

~~information detailed in the City's duly adopted Storm Drainage Design and Technical Criteria manual and the following:~~

~~(1) A vicinity map, at a maximum scale of 1" = 2,000', indicating the site location, as well as the adjacent properties within five hundred (500) feet of the site boundaries.~~

~~(2) A boundary survey or site property lines shown in true location with respect to topographic information.~~

~~(3) A plan of the site, at a maximum scale of 1" = 200', on a 24" x 36" sheet showing:~~

~~a. Name, address and telephone number of the landowner, developer and petitioner.~~

~~b. Existing topography (shown by dashed lines) having contour intervals of two (2) feet, unless otherwise specified by the City Engineer.~~

~~c. Proposed topography (shown by solid lines) having contour intervals of two (2) feet, unless otherwise specified by the City Engineer, including spot elevations.~~

~~d. Location of existing structures and natural features, such as stream channels, stands of trees, rock outcroppings, wetlands, historical/archaeological sites, significant wildlife habitats, vegetative stands and potential open space land as identified in the Comprehensive Plan, on the site, adjacent to the site and within one hundred (100) feet of the site boundary line.~~

~~e. Location of proposed structures or development on the site, if known.~~

~~f. Elevations, including spot elevations if buildings are shown, dimensions, location, extent and slope of all proposed grading, including building and driveway grades.~~

~~g. Plans and timing schedule for all temporary or permanent erosion control measures to be constructed with or as a part of the proposed work, including drainage facilities, retaining walls, cribbing and plantings. The timing schedule shall assure that the standards set forth in Section 16-31-50 above are adhered to from the commencement of construction. In preparing the site plan, the applicant shall use the soil erodibility zone classifications in the Storm Drainage Design and Technical Criteria manual, the soil classification data for the site identified by the U.S. Soil Conservation Service in the published Soil Survey, or the data which is collected, analyzed and reported upon by a qualified soils engineer registered in the State.~~

~~(4) A written report which includes the following:~~

~~a. A schedule indicating the anticipated project starting and completion dates, the time of overlot grading, construction phases and completion for vegetative and structural control measures.~~

~~b. A statement of the quantity of excavation and fill involved, source of the fill material and the total area of land surface to be disturbed.~~

~~c. Estimated itemized and total cost of the required temporary and permanent soil erosion control measures, which estimates shall include quantities and unit costs.~~

~~(5) Other information or data as may be required by the City Engineer, such as a soil investigation report which shall include, at a minimum, data regarding the nature, distribution and supporting ability of existing soils and rock on the site.~~

~~(Ord. 02-01 §3106; Ord. 04-17 §1; Ord. 05-13 §3106)~~

~~Sec. 16-31-70. Submittal process.~~

~~(a) All plans shall be submitted to the Engineering Division. Incomplete or otherwise inadequate application submittals shall be returned to the applicant with comments. The applicant shall comply with the provisions of this Article.~~

~~(b) The Engineering Division shall review and comment and either accept the plan or return the plan to the applicant within twenty (20) working days from the date the application submittal was determined to be complete. If the Engineering Division cannot review the plan within twenty (20) days, the applicant will be so notified. The Engineering Division and the applicant may mutually agree upon an extension of time for completion of the plan review or for retention of a qualified professional to perform the review. The applicant shall be responsible for all costs associated with the review.~~

~~(c) In the event the applicant desires to amend the plan, an amended plan which complies with the requirements set forth in Sections 16-31-50 and 16-31-60 above shall be submitted by the applicant and reviewed by the Engineering Division prior to the commencement of any work pursuant to the amended plan.~~

~~(Ord. 02-01 §3107; Ord. 05-13 §3107)~~

~~Sec. 16-31-80. Expiration of plan.~~

~~A permit shall be effective for twelve (12) consecutive months from the date of issue. Prior to the expiration date, the permit may be renewed upon approval by the City Engineer for a period of time not to exceed twelve (12) months.~~

~~(Ord. 02-01 §3108; Ord. 05-13 §3108)~~

~~Sec. 16-31-90. Appeals process.~~

~~If the applicant disagrees with the decision of the Engineering Division, the applicant may appeal to the City Council. The appeal shall be based on technical data or other relevant information. The Planning Commission may affirm, modify or reverse the findings, conclusions and decision of the Engineering Division or remand the decision to the Engineering Division for further review and findings.~~

~~(Ord. 02-01 §3109; Ord. 05-13 §3109)~~

~~Sec. 16-31-100. Fees.~~

~~(a) A nonrefundable filing fee shall be paid to the Engineering Division at the time of application. Fees are specified in the Engineering Division User Fee Manual.~~

~~(b) Any person, corporation, partnership, firm or other entity applying for a grading permit after commencement or completion of the activities authorized in said permit shall be required to pay double the standard fee.~~

~~(Ord. 02-01 §3110; Ord. 05-13 §3110)~~

~~Sec. 16-31-110. Security.~~

~~(a) To ensure rehabilitation of the disturbed area, the applicant shall furnish a letter of credit or other form of security acceptable to the City, naming the City as the secured party in an amount and type to be determined by the City Engineer based upon the magnitude of the land-disturbing activities and rehabilitation requirements. The amount of security will be one hundred fifteen percent (115%) of the cost estimate set forth in Section 16-31-60(4) or one hundred fifteen percent (115%) of the cost to vegetate the disturbed land to dryland grasses based upon unit costs determined by the City Engineer, whichever is greater. Due to the complexities of erosion control, in no instance shall the amount of security be less than two thousand five hundred dollars ($2,500.00), except as provided in Paragraph 16-31-30(1). The City Engineer shall have the right to call on the security in the event the schedules required in Subparagraphs 16-31-60(3)g and 16-31-60(4)a are not met.~~

~~(b) No erosion and sedimentation control plans will be approved without the submittal of the required security.~~

~~(c) The City will accept a cash escrow or letter of credit as security. The cash escrow or letter of credit will be returned to the applicant within sixty (60) days after the completion of the land-disturbing activity. Completion shall mean the achievement of the final stabilization of the land as indicated on the erosion and sedimentation control plan. Completion shall be determined by a representative of the City Engineer who shall notify the applicant in writing. The warranty period for erosion control construction shall be two (2) growing seasons.~~

~~(Ord. 02-01 §3111; Ord. 04-17 §1; Ord. 05-13 §3111)~~

~~Sec. 16-31-120. Insurance.~~

~~Every applicant, before commencing operations, shall be insured to the extent of two hundred thousand dollars ($200,000.00) per person, five hundred thousand dollars ($500,000.00) per occurrence, against liability arising from activities or operations conducted or carried on pursuant to any of the provisions of this Chapter, and such insurance shall be kept in full force and effect during the period of such activities or operations, including site rehabilitation. A certificate indicating protection by such insurance shall be filed by the applicant together with his or her application for permit. Said insurance shall not be released until final inspection and approval has been completed by the Engineering Division.~~

~~(Ord. 02-01 §3112; Ord. 05-13 §3112)~~

~~Sec. 16-31-130. Violations.~~

~~(a) Any person, corporation, partnership, firm or other entity of whatever description violating any provision of these regulations shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not more than one hundred dollars ($100.00), or by imprisonment for not more than ten (10) days, or by both such fine and imprisonment. Each day during which a violation exists shall constitute, and shall be punishable as, a separate offense.~~

~~(b) This Article may be enforced by injunction, including both the enjoining of actions or inactions in violation of this Article (i.e., land-disturbing activities undertaken without, or in violation of the terms of, a permit as required herein), and a mandatory injunction to require the removal of excavation or fill accomplished without, or in violation of the terms of, such a permit. In any such injunctive action, the City shall be entitled to an award of its costs of suit and any costs~~

~~incurred in the removal of fill and/or restoration of areas where fill or excavation activities have been undertaken in violation of the provisions of this Article.~~

~~(c) The City shall be entitled to recover its attorney's fees incurred in bringing any action to compel compliance with the provisions of these regulations or to compel compliance with any plan approved hereunder.~~

~~(Ord. 02-01 §3113; Ord. 05-13 §3113)~~

~~Sec. 16-31-140. Stop Work Order.~~

~~The City Engineer is authorized to order work stopped on any project which disturbs the land and which is not in compliance with the provisions of this Article.~~

~~(Ord. 02-01 §3114; Ord. 05-13 §3114)~~

~~Sec. 16-31-150. Abatement.~~

~~(a) In the event a landowner determines or discovers that a plan is not being adhered to, said landowner shall take immediate steps to abate said violation and shall notify the City Engineer of the deviation from the plan and the efforts undertaken to bring the work into compliance with said plan. The landowner shall be granted a period of five (5) calendar days from the date of discovery of said deviation to bring the work into compliance with the plan.~~

~~(b) In the event the City Engineer discovers a deviation from the plan, the landowner or authorized representative shall be notified in writing of said deviation and shall be required to bring the work into compliance with the plan within no more than five (5) calendar days from the date of notification. The written notice shall specify the areas of deviation from the plan. Failure to correct the deviation from the plan within the time period provided shall entitle the City to invoke the provisions of Section 16-31-130 above.~~

~~(Ord. 02-01 §3115; Ord. 05-13 §3115)~~

~~Sec. 16-31-160. Applicability of other laws and regulations.~~

~~Nothing contained herein relieves any person, corporation, firm or entity from the obligation to comply with any applicable state or federal laws or regulations relating to water quality or water quality standards or any other standards contained within this Chapter.~~

ARTICLE XXXII - Landscaping Standards

Sec. 16-32-10. Intent.

Sec. 16-32-20. Applicability.

Sec. 16-32-30. Water-efficient landscaping principles.

Sec. 16-32-40. Landscape design.

Sec. 16-32-50. Minimum area to be landscaped.

Sec. 16-32-60. Parking lot landscaping. (AMENDMENTS PROPOSED)

Sec. 16-32-70. Minimum plant size.

Sec. 16-32-80. Minimum plant quantity.

Sec. 16-32-90. Plant selection.

Sec. 16-32-100. Soil amendment.

Sec. 16-32-110. Irrigation. (AMENDMENTS PROPOSED)

Sec. 16-32-120. Mulching/groundcover.

Sec. 16-32-130. Plant replacement.

Sec. 16-32-140. Field change orders.

Sec. 16-32-60. Parking lot landscaping.

(a) Landscape islands shall be placed at the end of surface parking bays. Surface parking lot bays shall extend no more than fifteen (15) parking spaces without an intervening canopy tree(s) in an interior landscape island or landscape peninsula. Other options for parking lot landscaping may be considered by the City where it provides similar or greater reduction in the heat-island effect, visually interrupts expansive areas of pavement and promotes tree health.

(b) Landscape islands and landscape peninsulas shall be at a minimum, eight (8) feet in width and be the length of the adjacent parking spaces. Two (2) two-inch caliper canopy trees, and shrubs or ornamental grasses, and acceptable groundcover and mulch, are required for landscape islands, and one (1) two-inch caliper canopy tree, with shrubs or ornamental grasses, and acceptable groundcover and mulch, are required for landscape peninsulas.

(c) Additional landscaping in surface parking areas may be required to include medians and pedestrian walkways.

(d) All plant material except sod, groundcover or trees shall be set back a minimum of one (1) foot from any curb edge where necessary to prevent vehicle overhang from harming plant materials.

(e) Tree trunks shall be set back at least four (4) feet from the back of curbs or sidewalks, driveways and other hard surfaces to buffer from stress caused by salt, snow piling, vehicle overhang and compacted soils.

(f) The use of planting strips and shallow landscaped depressions in parking lots and along roads is encouraged to help trap and remove pollutants from storm water runoff as approved by the ~~City Engineer~~Director of Public Works or his/her designated representative and the Community Development Department.

(g) The City may require three-to four-foot tall landscaping in any one (1) or combination of the following: a decorative wall, an earthen berm with slopes no greater than 3:1 or fencing to screen parking lots from streets and/or adjoining land uses. Maximum screening heights may be required where necessary for security purposes.

(Ord. 11-05 Art. 4)

Sec. 16-32-110. Irrigation.

The following irrigation standards shall apply:

(1) All landscaped areas shall be served by a functioning automatic irrigation system.

(2) Temporary irrigation (no more than ~~one~~ two [~~1~~2] seasons) may be used to establish native grasses and native vegetation.

(3) Irrigation systems shall be designed with separate zones for different equipment or water requirements based on exposure, plant selection and slope.

(4) Master valves and backflow preventers are required.

~~(5) Drip emitters and sprinklers shall be placed on separate valves.~~

(6) Irrigation systems shall be designed to minimize overspray and runoff onto adjacent impervious surfaces such as roads, sidewalks and parking lots. ~~For landscaped areas less than ten (10) feet wide, irrigation shall be limited to subsurface drip irrigation, drip irrigation (point source) or multi-trajectory rotating strip nozzles.~~

(7) Rain sensors are required that will suspend the irrigation cycle when rainfall has occurred in an amount sufficient to negate the need for irrigation at the scheduled time.

(8) The installation of weather-based or soil-moisture-based smart controllers is required and shall be designed, installed and managed to apply the appropriate amount of water to maintain healthy plant material.

~~(9) Rotors, pop-up spray and drip emitters must be equipped with internal check valves to minimize water waste.~~

~~(10) Pop-up spray heads shall be equipped with internal pressure regulation.~~

~~(11) Pop-up spray heads or rotator heads shall be a minimum six (6) inches in height unless the mature height of the plant material being irrigated requires taller risers.~~

~~(12) Drip irrigation shall be point source drip or subsurface drip irrigation.~~

~~(13) Use of nontreated water for irrigation may be allowed if a permanent, legal and suitable supply is available.~~

ARTICLE XXXVI – Definitions

Sec. 16-36-10. Rules of construction.

Sec. 16-36-20. Definitions. (AMENDMENTS PROPOSED)

Engineer means the City's designated ~~City Engineer~~Director of Public Works or his/her designated representative as set forth by resolution or other City Council action, to perform the engineering functions for the City as set forth in this Chapter.

CHAPTER 17 Subdivisions

ARTICLE I - Administrative Provisions (AMENDMENTS PROPOSED)

ARTICLE II - General Standards, Procedures and Requirements (AMENDMENTS PROPOSED)

ARTICLE III - Preliminary Plan for Single-Family Detached Development

ARTICLE IV - Final Plat for Single-Family Detached Development

ARTICLE V - Final Plat for Single-Family Attached, Multi-Family and Nonresidential Development (AMENDMENTS PROPOSED)

ARTICLE VI - Condominium Plat

ARTICLE VII - Plat Amendments and Vacations (AMENDMENTS PROPOSED)

ARTICLE VIII - Certifications

ARTICLE IX - Exemptions

ARTICLE X - Dedication Standards

ARTICLE XI - Vested Property Rights

APPENDIX 17-A - PLAT CORRECTION CERTIFICATE

APPENDIX 17-B - VACATION APPROVAL CERTIFICATE

APPENDIX 17-C - LOT LINE ADJUSTMENT CERTIFICATE

ARTICLE I - Administrative Provisions

Sec. 17-1-10. Title.

Sec. 17-1-20. Purpose.

Sec. 17-1-30. Authority.

Sec. 17-1-40. Jurisdiction.

Sec. 17-1-50. Interpretation.

Sec. 17-1-60. Effective date. (AMENDMENTS PROPOSED)

Sec. 17-1-70. Repeals.

Sec. 17-1-80. Rules of construction.

Sec. 17-1-90. Definitions. (AMENDMENTS PROPOSED)

Sec. 17-1-100. Severability.

Sec. 17-1-110. Enforcement.

Sec. 17-1-120. Amendments.

Sec. 17-1-130. Control over platting.

Sec. 17-1-140. Review fees.

Sec. 17-1-150. Impact fees.

Sec. 17-1-160. Waivers.

Sec. 17-1-170. Powers of Planning Commission.

Sec. 17-1-180. Powers of City Council.

Sec. 17-1-185. Powers of the City Manager.

Sec. 17-1-190. Major activity notice.

Sec. 17-1-60. ~~Effective date.~~(Repealed)

~~The ordinance codified herein shall take effect on February 1, 2014.~~

(Ord. 13-12 Art. 4)

Sec. 17-1-90. Definitions.

~~*City Engineer* means the City's designated engineer as authorized by resolution, contract or other Council action, who performs the engineering functions as set forth in this Chapter.~~

Subdivision Improvements shall mean the street, drainage and other improvements including, but not limited to, landscaping, retaining walls, hardscape, etc., as shown on the approved construction plans.

Subdivision improvements agreement or *subdivision agreement* means one (1) or more security arrangements which the City shall accept to secure the actual cost of construction of such ~~public improvements~~subdivision improvements, as are required by this Chapter or other applicable regulations, within the subdivision. The subdivision improvements agreement (SIA) may include any one (1) or a combination of the types of security or collateral listed in this definition~~, and the subdivider may substitute security in order to release portions of the subdivision for sale~~.

ARTICLE II - General Standards, Procedures and Requirements

Sec. 17-2-10. Intent. (AMENDMENTS PROPOSED)

Sec. 17-2-20. Description of subdivision process. (AMENDMENTS PROPOSED)

Sec. 17-2-30. Applicant's responsibility.

Sec. 17-2-40. Subdivision improvements. (AMENDMENTS PROPOSED)

Sec. 17-2-50. Streets. (AMENDMENTS PROPOSED)

Sec. 17-2-60. Erosion and sediment control plan. (AMENDMENTS PROPOSED)

Sec. 17-2-70. Drainage study. (AMENDMENTS PROPOSED)

Sec. 17-2-80. Other ~~public improvements~~subdivision improvements. (AMENDMENTS PROPOSED)

Sec. 17-2-90. Guarantee of ~~public improvements~~subdivision improvements. (AMENDMENTS PROPOSED)

Sec. 17-2-100. Release of security. (AMENDMENTS PROPOSED)

Sec. 17-2-110. Additional review fees.

Sec. 17-2-120. Withdrawal of application.

Sec. 17-2-130. Inactive applications.

Sec. 17-2-10. Intent.

The following provisions apply to all subdivisions of land in the City to assure the creation of lots which can be developed in conformance with ~~this~~ Chapter 15, Chapter 16, and this Chapter 17, ~~Chapter 16,~~ the Building Code, Roadway Design and Construction Standards, Storm Drainage Design and Technical Criteria Manual, design guidelines and other applicable City regulations.

(Ord. 13-12 Art. 4)

Sec. 17-2-20. Description of subdivision process.

(a) Single-family detached development. The steps required to obtain approval of a subdivision for single-family detached development include preliminary plan and final plat. Each is a distinct process involving the submittal of an application, an application fee, required plans and reports and referrals of the proposal to other agencies and entities. At each step of the process, the level of design and engineering increases in order to relieve the applicant from major and potentially unnecessary expenses in situations that may require a redesign and, therefore, a revision of expensive engineering or planning reports. Approval of the preliminary plan does not ensure approval of the final plat. The processes include:

(1) Preliminary plan. The review of the feasibility of the project, including technical engineering, preliminary design and relationship to surrounding land uses; location and mitigation of geologic and other natural hazards; identification of visual and environmentally sensitive areas and critical wildlife habitat areas; identification of historic and archeologically sensitive sites; ability to obtain water and sanitation and other required services; adequacy of vehicular and pedestrian circulation; and conformance with the Comprehensive Plan, Zoning Code and applicable planned development sub-area plans. The preliminary plan shall be reviewed by the Planning Commission and reviewed and approved by the Council at a public meeting prior to submittal of the final plat for single-family detached development.

(2) Final plat. The review of all final engineering plans, subdivision improvement agreements and other legal requirements with final approval by the City Manager.

(b) Single-family attached, multi-family. The steps required to obtain approval of a subdivision for single-family attached, multi-family development includes final plat. In this case, the final plat shall be reviewed by the Planning Commission and reviewed and approved by the City

Council. It is an abbreviated process as it does not require preliminary plan review and approval; however, more information on the project is generally forthcoming, as these applications often accompany the site improvement plan for the site.

(c) Nonresidential. The steps required to obtain approval of a subdivision for nonresidential development includes final plat. In this case, the final plat shall be reviewed by the Planning Commission and reviewed and approved by the City Council. It is an abbreviated process as it does not require preliminary plan review and approval; however, more information on the project is generally forthcoming, as these applications often accompany the site improvement plan for the site.

Review Process	***Preliminary Plan***	***Final Plat***
Single-family detached development	Reviewed by Planning Commission and approved by City Council	Approved by City Manager
Single-family attached and multi-family development	N/A	Reviewed by Planning Commission and approved by City Council
Nonresidential development	N/A	Reviewed by Planning Commission and ~~reviewed~~ approved by City Council

(d) If any proposed plan or plat is denied by the Council or City Manager, a new subdivision application for the same or substantially the same request, as determined by the Director, shall not be accepted within one (1) year of such denial. The applicant may appeal the decision of the Director, in writing, to the Council within ten (10) days from the date of the decision.

(Ord. 13-12 Art. 4)

Sec. 17-2-40. Subdivision improvements.

In each subdivision, the City shall determine the type, location and extent of necessary ~~public improvements~~subdivision improvements, depending upon the characteristics of the proposed development and its relationship to surrounding areas. The developer shall provide for the construction, at no cost to the City, of all utilities and other public infrastructure, as required by the City, and provide the necessary security needed to ensure such improvements are made as determined by the City. Improvements shall be made according to plans and specifications prepared by a qualified professional engineer in accordance with the Roadway Design and Construction Standards, the Storm Drainage Design and Technical Criteria Manual, the Grading,

Erosion and Sediment Control Manual, Chapter 15, the Building Code and other applicable regulations. Underground placement of utility lines shall be required in all subdivisions.

Sec. 17-2-50. Streets.

All streets and road rights-of-way shall be constructed in conformance with the roadway standards specified in the Roadway Design and Construction Standards, the Storm Drainage Design and Technical Criteria Manual, the Grading, Erosion and Sediment Control Manual, Chapter 15 and other applicable regulations.

Sec. 17-2-60. Erosion and sediment control plan.

An erosion and sediment control plan shall be submitted which addresses the existing and potential erosion and sediment problems created by the proposed development. Conservation measures used to mitigate these concerns shall be in accordance with Chapter 16 of this Code, the Roadway Design and Construction Standards, the Storm Drainage Design and Technical Criteria Manual and the Grading, Erosion and Sediment Control Manual, and Chapter 15. If applicable, the Soil Conservation District shall be consulted regarding erosion and sediment control.

Sec. 17-2-70. Drainage study.

Drainage studies shall be submitted as part of the subdivision submittal requirements in conformance with the Storm Drainage Design and Technical Criteria Manual and Chapter 15.~~.~~

Sec. 17-2-80. Other ~~public improvements~~subdivision improvements.

Other reasonable improvements not specifically mentioned herein and found appropriate and necessary by the City shall be constructed at the applicant's expense within such time and in conformance with such specifications as deemed necessary and appropriate.

(Ord. 13-12 Art. 4)

Sec. 17-2-90. Guarantee of ~~public~~ subdivision improvements.

(a) No final plat shall be recorded until the applicant has submitted, and the Public Works Department has reviewed and accepted, one (1) or a combination of the following:

(1) A subdivision improvement agreement to construct any required ~~public improvements~~subdivision improvements shown in the final plat documents and approved construction plans.

(2) Other agreements or contracts setting forth the plan, method and parties responsible for the construction of any required ~~public improvements~~subdivision improvements shown in the final plat documents which, in the judgment of the Public Works Department, will make reasonable provision for completion of said improvements in accordance with design and time specifications.

(3) Documentation that there are no required ~~public improvements~~subdivision improvements associated with the final plat.

(b) When required, the applicant shall provide security, in a form acceptable to the City, for the ~~public improvements~~subdivision improvements as follows:

(1) The applicant shall provide the City with an itemized estimate of the cost of required improvements on a standardized form available from the Public Works Department in accordance with the requirements of the Roadway Design and Construction Standards and the Storm Drainage Design and Technical Criteria Standards. Upon review, the Public Works Department shall require one (1) of the following:

a. Security of one hundred fifteen percent (115%) of the total cost of the required ~~public improvements~~subdivision improvements shall be paid by the applicant ~~if any lots or parcels of the subdivision are to be sold or transferred, or issuance of building permits, prior to completion and probationary acceptance of all required public improvements.~~ prior to the approval of the construction plans and issuance of a construction permit.

b. Security of fifteen percent (15%) of the total cost of required ~~public improvements~~subdivision improvements shall be paid by the applicant prior to the sale or transfer of lots, or issuance of building permits, when the required ~~public improvements~~subdivision improvements have been completed and been granted probationary acceptance by the Public Works Department.

c. No security is required toward the total cost of required ~~public improvements~~subdivision improvements that have been completed and have been granted final acceptance by the Public Works Department (at the end of the two-year probationary period).

(c) The ~~City Engineer~~Director of Public Works or his/her designated representative shall review the SIA and the cost estimates and recommend changes as necessary to complete the required improvements.

(d) The City Attorney shall review any modifications made by the applicant to the SIA and notify the applicant of any deficiencies or required changes. The SIA shall be in the form provided by the City Attorney and approved by the City Manager.

(e) The ~~City Engineer~~Director of Public Works or his/her designated representative shall monitor the SIA and any performance agreements.

(f) At the discretion of the City Manager, the City may waive the requirement for security by federal, state or local governments, including metropolitan districts, special districts and the like.

Sec. 17-2-100. Release of security.

As improvements are completed, the subdivider may apply to the Public Works Department for a release of part or all of the security. Upon inspection by the ~~City Engineer~~Director of Public Works or his/her designated representative and upon their approval, the City shall release the security or portion thereof. If the City determines that any improvements are not constructed in substantial compliance with the specifications, it shall furnish the applicant a list of specific deficiencies and shall retain security sufficient to ensure such compliance. If the City determines that the applicant has not constructed any or all of the improvements in accordance with all of the specifications, the City may withdraw and employ from the deposit of security such funds as may be necessary to construct the improvement in accordance with the specifications. If the submitted security is not sufficient to cover the improvements, the applicant is responsible for the additional

costs. Security to cover the cost of repair of such improvements is required during the warranty period in accordance with the requirements of the subdivision improvements agreement.

ARTICLE V - Final Plat for Single-Family Attached, Multi-Family and Nonresidential Development

Sec. 17-5-10. Intent.
Sec. 17-5-20. – Approval standards.
Sec. 17-5-30. – Prerequisite.
Sec. 17-5-40. – Submittal process.
Sec. 17-5-50. – General submittal requirements.
Sec. 17-5-60. – Final plat Exhibit (Proposed Amendments)
Sec. 17-5-70. – Final development reports and plans.
Sec. 17-5-80. – Vested property rights.
Sec. 17-5-90. – Post-approval procedure.
Sec. 17-5-100. – Expiration of approval.

Sec. 17-5-60. (13) The following certifications on a single sheet shall be provided in accordance with Article ~~IX~~ VIII of this Chapter: Surveyor, Dedication Statement, Storm Drainage Facilities Statement, General Overlot Drainage Note, City Manager, County Clerk and Recorder's office and Title Verification.

ARTICLE VII - Plat Amendments and Vacations

Sec. 17-7-10. – Intent.
Sec. 17-7-20. – Approval standards.
Sec. 17-7-30. – Plat amendment and vacation process provisions.
Sec. 17-7-40. – Plat correction.
Sec. 17-7-50. – Lot line and/or utility easement vacation.
Sec. 17-7-60. - Lot line/building envelope adjustment.
Sec. 17-7-70. – Replat of subdivision where additional lots are created. (Proposed Amendments)
Sec. 17-7-80. – Vacation of plat without platted dedication and/or constructed public infrastructure.
Sec. 17-7-90. – Vacation of plat with platted dedication and/or constructed public infrastructure.
Sec. 17-7-100 – Vacation of public ways.
Sec. 17-7-110. – Public notice.
Sec. 17-7-120. – Application resubmittal.
Sec. 17-7-130. – Lot numbering.

Sec. 17-7-70. - Replat of subdivision where additional lots are created.

Replats of subdivided land, where additional lots are created requires the following review process:

(1) When three (3) or fewer lots are created for single-family detached land use, the replat may be acted on by the City Manager, according to the submittal and review requirements of Article IV of this Chapter.

(2) When more than three (3) lots are created for single-family detached land use, the replat shall be processed in accordance with the submittal and review requirements of Article IV of this Chapter, except that it shall be acted on only by the City Council.

(3) When any lots are created for single-family attached, multi-family or nonresidential land use, the replat shall be acted on only by the City Council, following a 21-day referral period, according to the submittal ~~and review~~ requirements of Article ~~IV~~ V of this Chapter. The post-approval procedure and expiration of approval requirements of Article V shall also apply.

Chapter 18 – Residential Code

Staff note: This chapter of the Lone Tree Municipal Code adopts by reference the International Residential Code in its entirety, except as "as otherwise provided" by the City. The following are proposed new standards and process for a Drainage Erosion Sediment Control permit for single-family detached development in Section 401 of the Residential Code.

R401.3 Projects that Require a Drainage Erosion Sediment Control (DESC) Permit.
City of Lone Tree requires that a DESC Permit be obtained prior to the start of land disturbing activities within the City of Lone Tree for new single family detached homes or an addition to single family detached homes.

R401.3.1 Drainage Plan Design Elements.
The Drainage Plan shall be lot specific, and shall provide the detailed final grading for the lot, and or disturbed area(s). The Drainage Plan shall reflect information provided in the Phase III Drainage Plan for the given area and comply with the following requirements:

1. Slope Requirements. A minimum constant slope of 10% and a maximum constant slope of 33% in the first 10 feet away from the foundation walls and window wells shall be established for pervious surfaces. All other disturbed areas shall have a minimum of 2% slope. All pervious and impervious areas shall slope continuously to the lowest point where stormwater discharges from the lot (e.g., sidewalk, gutter, inlet, adjacent property, or easement). At this point, the discharge water shall be dispersed into a sheet flow and directed in a manner as to not cause harm to downslope properties. Where minimum slopes cannot be attained, alternate means to adequately convey the water from the lot shall be designed and submitted by the Designer to the Building Division for acceptance. Impervious surfaces adjacent to the foundation shall have adequate drainage away from the foundation as determined by the Designer. Refer to the International Residential Code, as amended, for specific requirements.
2. Drainage Swales. Drainage swales may not be located within the foundation backfill zone unless limited by property lines. Drainage swales shall have adequate depth, width and longitudinal gradient to convey the stormwater off the lot in an effective, non-damaging manner. Drainage swales shall be designed to spread flows out as much as feasible.
3. Retaining Walls. Proposed slopes steeper than 3 to 1 are difficult to vegetate and maintain. Long term rill and gully erosion are likely on such slopes. Approved permanent stabilization shall be required to control grades on sites that cannot be graded at a 3 to 1 slope. Retaining walls may be necessary to control grades on a site. Retaining walls shall not encroach onto adjacent properties. Retaining walls taller than 4 feet (including footing) or that carry a surcharge require a separate Building Permit and shall be designed by a Professional Engineer.
4. Driveways. Driveways shall have a minimum slope of 2% away from the foundation for a distance that will allow adequate drainage away from the garage entrance as determined by the Designer.
5. Downspouts and Sump Pumps. Downspouts and sump pumps shall discharge a minimum of 4 feet away from the foundation wall and outside the foundation backfill

zone unless limited by property lines. Downspouts shall not directly discharge onto adjacent properties.

6. Designing to the Phase III Drainage Plan. The Designer shall ensure that the Drainage Plan functions in accordance with the Phase III Drainage Plan for the development, if applicable.

R401.3.2 Drainage Plan Requirements.

The Drainage Plan shall be lot specific, and shall provide the detailed final grading for the lot, and or disturbed area(s). The Drainage Plan shall be shown, at a minimum, on 8.5" x 11" or a scale of 1 inch equals 20 feet. The Drainage Plan shall include:

1. Basic property information including; street address, subdivision, filing, lot and block.
2. North Arrow.
3. All property lines, easements and setbacks.
4. 100 Year Floodplain limits shall be shown if there is floodplain on the lot.
5. Spot elevations and drainage flow arrows to accurately illustrate the site drainage patterns. At a minimum the plan shall contain:
   a) Drainage swales labeled with spot elevations to the nearest 1/10 of a foot, and drainage flow arrows, illustrated to the nearest 1%, starting at the high point(s) and along the swale at 25 foot intervals.
   b) Spot elevations, to the nearest 1/10 of a foot at:
      - Each foundation corner.
      - Each point of foundation elevation change.
      - Top of driveway at the garage entrance.
      - Point of driveway discharge.
      - Top of Wall and Bottom of Wall elevations for all retaining walls at each end and at 20 foot intervals.
   c) Slopes illustrated with an arrow showing the direction of flow to the nearest 1%, for a distance of 10 feet from the top of backfill at foundation for:
      - Each foundation corner.
      - Along the foundation at 20 foot intervals.
      - Each point of foundation elevation change.
   d) Additional information (e.g., contours) may be required by the City depending on site specific conditions.
6. Location(s) where existing storm water runoff enters the lot and discharges from the lot to adjacent rights-of-way, properties and easements labeled.
7. Name, address and phone number of the Designer's firm.
8. DESC Drawing Designer's signature block with name, date and registration number.

R401.3.3 DESC Inspections.

R401.3.3.1 Final Grade Inspection.

Final Grade inspection shall be made after the permitted work is complete and prior to the issuance of the Certificate of Occupancy

R401.3.3.2 Other Inspections.

In addition to the called inspection above, the Building Official may make or require any other inspections to ascertain compliance with this code or other laws enforced by the Building Official.

R401.3.4 Final Drainage Certificate.
To ensure conformance with the approved design and to ensure adequate drainage away from the foundation and off the lot, a Final Drainage Certificate shall be certified by a Registered Professional Engineer (PE) or a Registered Professional Land Surveyor (PLS) and approved by the City of Lone Tree before a Certificate of Occupancy can be issued. The following items shall be clearly illustrated on a copy of the approved Drainage Plan:

- All vertical and horizontal deviations to grades, drains, spot elevations, slopes and drainage patterns throughout the lot as shown on the approved DESC Plan.
- Location(s) of the sump pump discharge, if applicable.
- The Final Drainage Certificate shall be signed and stamped by a PE or a PLS.

The Drainage Certificate requirement will be waived for non-habitable accessory structures and small additions if:

- Compliant drainage has been verified by the Inspector during a Final Grade Inspection.

R401.3.5 DESC Permit Closeout.
DESC Permits will be closed at the completion of construction and prior to the approval of the Certificate of Occupancy only when the following conditions are met:

1. All of the previously disturbed soil areas are covered with the building structure, grass/sod, rock, mulch, pavers, or other approved landscape materials; or
2. In the case that landscaping improvements have not been completed, the Permittee(s) shall install the Final Erosion and Sediment Control BMPs shown on the approved DESC Plan. Additional sediment controls may be required at the discretion of the Inspector in order to protect adjacent lots and the storm sewer system.

R401.3.6 Posting Surety.
The City of Lone Tree recognizes that, in some cases, final grading and drainage measures cannot be immediately achieved prior to the need to close a transaction, and occupy a property. In the event that the final grading and drainage measure cannot be completed prior to the need for a Certificate of Occupancy, Surety and a DESC permit fee shall be posted with the Building Division. The Certificate of Occupancy will be released upon receipt of the Surety and after the Inspector has verified that the Erosion and Sediment Control BMPs are effectively implemented in accordance with the approved DESC Plan.

R401.3.6.1 Amount of Surety.
The amount of Surety required shall be $2,500.00. For lots larger than 1.0 acre, the required Surety shall be $2,500.00 per disturbed acre.

R401.3.6.2 Forms of Surety.
The City of Lone Tree accepts 3 different forms of security. Surety can be deposited as a Corporate or Cashier's Check, Irrevocable Letter of Credit or by Credit Card.

R401.3.6.3 Release of Surety.

Surety will be returned upon completion of the Final Grade inspection and acceptance of the Final Drainage Certification.

Jennifer Drybread

From: Dan Clawson <dbclawson@qwest.net>
Sent: Sunday, November 06, 2016 11:19 AM
To: Jennifer Drybread
Cc: Linda Langewisch; Marilee Wing
Subject: RE: Proposed Amendments to the City of Lone Tree Municipal Code

Categories: Red Category

Jennifer,

Two items of note in the proposed modifications.

Section 15-1-50 refers to a flood insurance study dated 2-17-17, a date in the future. Shouldn't it refer to a 2016 study rather that a study on a future date.

Section 16-2-210, Property Maintenance, specifically excludes single family detached homes such as mine. I believe it should be amended to include single family detached homes in order that these homeowners also be subject to the same requirement to remove snow from sidewalks within 24 hours like all other residents, associations and businesses in the city.

Thanks,
Dan Clawson
10516 Rivington Ct.

From: Jennifer Drybread [mailto:Jennifer.Drybread@cityoflonetree.com]
Sent: Friday, November 04, 2016 3:16 PM
To: lbradley@tmmccares.com; val@coloradomanagement.com; silvia@westwindmanagement.com; borch101@aol.com; sharonvanram@comcast.net; breid@managementandmaintenance.net; Borch101@aol.com; ehubbard@cchoapros.com; corpoffice@pcms.net; acmoore5@comcast.net; silvia@westwindmanagement.com; shannon.torgerson@claconnect.com; hrvfiel35@gmail.com; Bobbi@westwindmanagement.com; jfletcher@pcms.net; davidw.montecitohoaboard@gmail.com; jeffn.montecitohoaboard@gmail.com; kevinspencer3@icloud.com; president@muirfieldatlonetree.org; LLangewisch@msihoa.com; doc@maximummgt.com; dbclawson@qwest.net; tammy@maximummgt.com; rich.steinberg@emerson.com; mpeck@tmmccares.com; dirtbag918@aol.com; corpoffice@pcms.net; seth@stcinc.com; Place, Charles <Charles.Place@qwest.com>; doc@maximummgt.com
Subject: Proposed Amendments to the City of Lone Tree Municipal Code

Greetings,

I apologize in advance if you have been sent this email twice. Sorry for any inconvenience.

Attached is a summary and proposed amendments to Chapters 11, 15, 16, and 17 of the Lone Tree Municipal Code for your review and comment. ***Please provide any written comments to me by Monday, November 21, 2016.*** Comments can be sent via email (jennifer.drybread@cityoflonetree.com), fax (303-225-4949), or via postal mail in care of my attention at the address below. We are also attaching a referral response form if you prefer.

Please contact me should you have any questions. Thank you!

9568 La Quinta Drive
Lone Tree, Colorado 80124

November 6, 2016

Jennifer Drybread, Senior Planner
City of Lone Tree
9220 Kimmer Drive #100
Lone Tree, CO 80124

RE: Proposed Municipal Code Changes RG-16-71

On behalf of the Terra Ridge HOA, an association of 177 single family homes which were platted under Douglas County through two filings, then included in the original incorporation of the City of Lone Tree appreciates the opportunity to offer comments to the proposed code changes.

Over +20 years, our HOA Board of Directors and Design Review Committee have struggled at times with the City's codified administrative process that often overlooked gray areas we are unable to control, regulate or oversee at our grass roots level. Most of the code revisions appear to show with better clarity, the responsibilities of the City. If these code revisions prevail and are adopted, our HOA board will request a "workshop" with City staff including legal counsel, to assist us recraft our bylaws and covenants where we may avoid duplication, shed light on said gray areas, and to ensure we are covering items we have omitted and are responsible for. Before this meeting, our association request that a qualified City staff member review our recorded subdivision covenants and Design Guidelines to advise us of where oversights exist and where duplicated matters can be eliminated.

We wish to highlight two examples in the packet where proposed revisions will affect the way we do business at the HOA level:

(1) The proposed revisions now cover construction trailers and/or trash bins associated with private re-construction projects and planned to be temporarily stored on the public streets; as they must now have a permit from the City (Chapter 11). Terra Ridge's long standing subdivision covenants have a provision that on-street storage is not allowed for extended periods of time and we have been compelled to engage our management company & legal counsel when a homeowner is not abiding. Having the City now cover this for us is a "game changer" and requires our Management Company, Board & Architectural Committee members to understand how it now may be regulated and enforced by the City, including traffic control for safety.

(2) Revisions relative to storm water (i.e. chapters 15 & 17) will require expenditures on our part as our original covenants did not foresee or anticipate our need to use our reserve funds for these responsibilities. Furthermore, we homeowners are not hydrologist, flood or water quality control experts and the ponds that lie within our common areas present a significant liability challenge to us. We are not clear if these changes only apply to new subdivisions or are applicable to existing subdivisions and their associations for such common areas that fall into our silo of maintenance obligations.

Most if not all HOA's in the City are Covenant Controlled. Given that the City is opening up the code for revision, we see this as a long overdue opportunity to integrate an HOA Design Review sign-off in the building permitting process. One recurring yet important issue we see is how colors, style, patterns and other exterior design compatibility features regulated by each HOA, are not recognized by the building department and have been minimized to a 'suggestion' within the instructions for building permits. We have asked our "Home Rule" City on repeated occasions that building permits require a checkbox for the HOA sign-off before consideration to issue a permit that has implications for exterior appearance and compatibility. Failure to enable the HOA board to pre-approve exterior changes in essence subjugates the purpose & need for an HOA Board and a covenant-controlled neighborhood. We clearly would acquiesce to situations of emergency repairs.

We have only highlighted a few examples of changes being proposed, which have the best of intentions, but do not clarify for the HOA's, how we are to effectively embrace them. In some situations, these revisions will absolve us of our responsibilities, but in others, create non-funded mandates. That is why we request a "workshop" be offered to all HOA groups so that we may understand what needs to be done to bring our rules into compliance.

We wish to express our gratitude to the City Council for understanding the implications that these revisions and changes present to the HOA groups who share the same interest of process and predictability, protecting property values, property rights, and the other inalienable rights within a "Home Rule" City like Lone Tree.

Sincerely,

Rick Solomon

Rick Solomon, President
Terra Ridge HOA

cc. PCMS
TR Board & DRC

Jennifer Drybread

From: Lisa Albers
Sent: Thursday, December 01, 2016 7:46 AM
To: Taylor Goertz; Ward Mahanke; Jennifer Drybread
Cc: John Cotten
Subject: FW: THANK YOU !!

From Rick Solomon. Please see below.

Lisa A. Albers, P.E.
Capital Improvement Project Manager
City of Lone Tree
9222 Teddy Lane
Lone Tree, CO 80124
Direct: (303) 551-0153
Cell: (720) 688-3331

From: Rick Solomon [mailto:dirtbag918@aol.com]
Sent: Wednesday, November 30, 2016 5:16 PM
To: Lisa Albers <Lisa.Albers@cityoflonetree.com>; Kelly First <Kelly.First@cityoflonetree.com>; John Cotten <John.Cotten@cityoflonetree.com>
Cc: Timmaley@comcast.net; kbattilega@gmail.com; mrsbbfire@gmail.com; esalehiamin@gmail.com; phannan@ch2m.com; sandyschiel@me.com; corpoffice@pcms.net; Jackie Millet <Jackie.Millet@cityoflonetree.com>; Susan Squyer <Susan.Squyer@cityoflonetree.com>; Cathie Brunnick <Cathie.Brunnick@cityoflonetree.com>; Jay Carpenter <Jay.Carpenter@cityoflonetree.com>; Wynne Shaw <Wynne.Shaw@cityoflonetree.com>
Subject: THANK YOU !!

Lisa: Please pass along to the other staff in attendance, our gratitude for the time you spent with the Terra Ridge HOA in a "workshop" fashion to go over our covenants and guidelines as they relate to the City Charter and codes. We both have an appreciation and respect for each others challenges of managing a City and an HOA in a responsible & sustainable fashion.

We will follow up with PCMS to investigate how we may engage some of the ideas you shared with us and use their expertise - which we pay for.
We all have that innate desire to be the best stewards during our time of service.

Rick Solomon, President
Terra Ridge HOA

PS. I would venture to say, most folks who visit our City and neighborhoods would say it is "pretty nice" but have no idea how much work and attention to detail is involved.
For all you do - hidden behind the curtain, we again express our appreciation.

CENTENNIAL AIRPORT
ARAPAHOE COUNTY PUBLIC AIRPORT AUTHORITY
7800 South Peoria Street, Unit G1
Englewood, Colorado 80112
main: 303.790.0598
fax: 303.790.2129
www.centennialairport.com

November 21, 2016

Ms. Jennifer Drybread
City of Lone Tree Community Development Dept.
9220 Kimmer Drive Suite 100
Lone Tree, CO 80124

Re: PROPOSED MUNICIPAL CODE AMENDMENTS; RG16-71

Dear Ms. Drybread,

Thank you for the opportunity to review the Proposed Municipal Code Amendments. We agree with the proposed amendments to Sec. 16-2-110 of the Lone Tree Municipal Code.

Please feel free to call me if you have any questions.

Sincerely,

Aaron Repp
Noise & Environmental Specialist

Right of Way & Permits
1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571.3284
donna.l.george@xcelenergy.com

November 21, 2016

City of Lone Tree Community Development Department
9220 Kimmer Drive, #100
Lone Tree, CO 80124

Attn: Jennifer Drybread

Re: Lone Tree Municipal Code Update 2016

Public Service Company of Colorado (PSCo) has reviewed the **Lone Tree Municipal Code Update 2016** and has **no apparent conflict**.

It is requested that the finalized code update be sent to me at the above email address or mailing address.

If you have any questions about this referral response, please contact me at (303) 571-3306.

Donna George
Contract Right of Way Referral Processor
Public Service Company of Colorado

CITY OF LONE TREE
Community Development Department

REFERRAL REQUEST

Today's date: November 4, 2016, 2016

Project Type: Proposed Lone Tree Municipal Code Amendments, Project RG16-71

Comments Due By: November 21, 2016
If you are unable to respond by the due date, please contact the project planner

Dear Referral Organization:
Information on the above referenced proposal in the City of Lone Tree is provided for your review and comment. Please submit your response no later than the due date to ensure adequate time to consider comments and enter them into the public record.

If you have difficulty viewing or understanding any of the information or have questions, please contact me at 303-708-1818. Printed materials and extra sets of materials are available upon request. Plans may also be viewed at the City offices from 8am-5pm.

__X__ **We have no comments regarding this proposal**

____ **Please note the following concerns this organization has:**

_____

_____

_____

____ **See attached letter for comments regarding this proposal**

Organization Name: South Metro Fire Rescue

Your name: Jeff Sceili

Your signature: _____ **Date:** 11/16/16

This project may be subject to public meetings. Please check the City's web site (www.cityoflonetree.com) for posted agendas or contact this office. Thank you for your consideration.

Jennifer Drybread

Senior Planner

PLEASE RETURN THIS PAGE AND ANY COMMENTS TO:

City of Lone Tree Community Development Dept.
9220 Kimmer Drive Suite 100
Lone Tree, CO 80124
Ph: 720-509-1273
Fx: 303-225-4949
jennifer.drybread@cityoflonetree.com

Jennifer Drybread

From: Cathleen Valencia <CValencia@arapahoegov.com>
Sent: Tuesday, November 15, 2016 12:55 PM
To: Jennifer Drybread
Cc: Chuck Haskins; Julio Iturreria
Subject: outside referral - Lone Tree Municipal Code

Jennifer,

Arapahoe County Engineering thanks you for giving us the opportunity to review the Lone tree Municipal Code changes. The Engineering Division has no comments regarding the referral at this time based on the information submitted.

Please know that other Divisions in the Public Works Department may submit comments as well.

Sincerely,

Cathleen Valencia, P.E.
Engineering Services Division
Arapahoe County Public Works & Development
6924 South Lima Street
Centennial, CO 80112 (720) 874-6500
cvalencia@arapahoegov.com

ARAPAHOE COUNTY
COLORADO'S FIRST

Jennifer Drybread

From: Julio Iturreria <JIturreria@arapahoegov.com>
Sent: Monday, November 14, 2016 4:29 PM
To: Jennifer Drybread
Subject: Lone Tree Municipal Code

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Jennifer,
Thanks for the opportunity to review the Code, however I have no comment on this document.
Hope everything is going well.
Best,
Julio

Julio G Iturreria
Long Range Planning Manager
Arapahoe County
720-874-6657 (direct)

CITY OF LONE TREE
Community Development Department

REFERRAL REQUEST

Today's date: November 4, 2016, 2016

Project Type: Proposed Lone Tree Municipal Code Amendments, Project RG16- 71

Comments Due By: November 21, 2016
If you are unable to respond by the due date, please contact the project planner

Dear Referral Organization:
Information on the above referenced proposal in the City of Lone Tree is provided for your review and comment. Please submit your response no later than the due date to ensure adequate time to consider comments and enter them into the public record.

If you have difficulty viewing or understanding any of the information or have questions, please contact me at 303-708-1818. Printed materials and extra sets of materials are available upon request. Plans may also be viewed at the City offices from 8am-5pm.

_X_ **We have no comments regarding this proposal**

____ **Please note the following concerns this organization has:**

____ **See attached letter for comments regarding this proposal**

Organization Name: _____

Your name: Laura Leary

Your signature: **Date:** 11/14/16

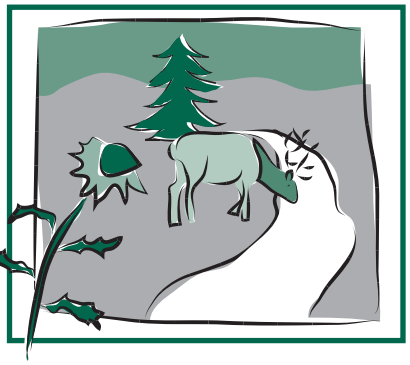
This project may be subject to public meetings. Please check the City's web site (www.cityoflonetree.com) for posted agendas or contact this office. Thank you for your consideration.

Jennifer Drybread

Senior Planner

PLEASE RETURN THIS PAGE AND ANY COMMENTS TO:
City of Lone Tree Community Development Dept.
9220 Kimmer Drive Suite 100
Lone Tree, CO 80124
Ph: 720-509-1273
Fx: 303-225-4949
jennifer.drybread@cityoflonetree.com

Colorado State University
Extension



Rainwater Collection in Colorado

Fact Sheet No. 6.707 Natural Resources Series | **Water**

by P.E. Cabot, C.C. Olson, R.M. Waskom and K.G. Rein*

The purpose of this factsheet is to provide information about the regulatory and health aspects of rainwater collection in Colorado. The information provided in this factsheet is based primarily on language in Colorado House Bill 16-1005 and is intended to inform citizens on how to properly use rain barrels in accordance with Colorado law.

What is Rainwater Collection?

Rainwater collection, also called rainwater "harvesting," is the process of capturing, storing and directing rainwater runoff and putting it to use. Water from roof gutter downspouts is usually directed onto landscaped areas and is incidentally consumed by plants, but this form of use is not regarded as rainwater harvesting.

Actual rainwater harvesting involves the collection of rainfall runoff from rooftops, concrete patios, driveways and other impervious surfaces. Rainwater collection systems vary from the simple and inexpensive to the complex and costly. Typically, rooftop rainwater collection systems are simple, consisting of gutters, downspouts, and storage containers. Inexpensive rainwater storage systems commonly make use of an above ground container such as a barrel or plastic tank with a lid to reduce evaporation and bar access for mosquitos to breed. Any container capable of collecting the rain shedding from a roof or patio can be used as a rainwater harvesting system, but to be in conformance with Colorado water law, the container additionally must be equipped with a sealable lid. More sophisticated systems have "first flush" diverters that are recommended to exclude capture of the initial rain that might carry impurities from the roof.

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Water Rights Issues Concerning Rainwater Collection

Colorado residents should understand that water rights in Colorado are unique compared to other parts of the country. The use of water in this state and other western states is governed by what is known as the prior appropriation doctrine. This doctrine of water allocation controls who uses water, how much water may be used, the types of uses allowed, and when those waters can be used. A simplified way to explain this system is often referred to as the priority system or "first in time, first in right." It may seem strange that rainwater harvesting in Colorado is so carefully watched, but understanding why this is so can provide valuable insight into the way water is shared in Colorado. In our arid environment, every drop counts and water rights holders depend upon the runoff from snowmelt and rainfall to supply the beneficial uses to which they apply their water rights. Captured precipitation that is consumed "out of priority" may deprive downstream and/or senior water right holders of their right to use water from the natural stream, which comprises water that originates as snow and rain. Even though the detention of rooftop precipitation might only be temporary and minimal, it may still alter the nature of historic flow patterns.

How to Use Rain Barrels Legally in Colorado

In order to safeguard senior holders of Colorado water rights, diverting and storing water is allowed only during times when all water rights in the basin are satisfied. It is impractical, however, for homeowners to know at all times whether water rights are satisfied. To collect rainwater without regard for other water rights, there are two laws which establish allowances for the limited collection of rainwater from rooftops of residential dwellings. These laws are further

Quick Facts

- Most homeowners in Colorado are now allowed to use rain barrels to collect rainwater.
- A maximum of two rain barrels with a combined storage of 110 gallons or less are allowed at each household.
- Collected rainwater may be used to irrigate outdoor lawns, plants or gardens.
- Untreated rainwater collected from roofs is not safe to drink.

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described below. Prior to the passage of House Bill 16-1005, in particular, rainwater collection was not permitted except under specific circumstances.

There are several restrictions that are important to follow in order to use rain barrels legally in Colorado. These restrictions differ depending on your residential situation.

Rain barrel use under HB16-1005

Under House Bill 16-1005, rain barrels can only be installed at single-family households and multi-family households with four (4) or fewer units. A maximum of two (2) rain barrels can be used at each household and the combined storage of the 2 rain barrels cannot exceed 110 gallons. Rain barrels can only be used to capture rainwater from rooftop downspouts and the captured rainwater must be used on the same property from which the rainwater was captured, for only outdoor purposes, including to water outdoor lawns, plants and/or gardens. Rain barrel water cannot be used for drinking or other indoor water uses.

It is important for rain barrel users to understand that the capture and use of rainwater using rain barrels does not constitute a water right. HB16-1005 includes language that could result in the State Engineer curtailing the use of individual rain barrels if a water right holder can prove that those rain barrels have impacted their ability to receive the water that they are entitled to by virtue of their water right.

Rain barrel use under SB09-080

Under special circumstances explained in Senate Bill 09-080, rural residents that qualify for "exempt" wells may collect rainwater with a Rooftop Precipitation Collection System Permit from the Colorado Division of Water Resources. Though these collection system permits do not limit the size of the rain barrel, the water must be collected from the roof of the primary residence and the rainwater may only be used for the uses allowed under the resident's exempt well permit. For example, if the well permit allows for household uses only, then the rainwater could only be applied to non-potable uses in the residence; if the well permit allows for household uses and outdoor uses including lawn and garden irrigation and/or animal watering, then the rainwater could also be used for those uses.

Colorado residents that qualify for exempt well permits may be able to collect 110 gallons of water under HB16-1005 and collect rainwater for additional uses under SB09-080, so long as they can meet the restrictions described for the two laws.

Rooftop Precipitation Collection System Permit applications can be obtained from the Colorado Division of Water Resources. The application provides notice of intent to collect precipitation and a description of how it will be captured. Instructions on acquiring a rooftop precipitation collection permit can be found at the website for the Colorado Division of Water Resources, under the category "Well Permitting" and sub-category "Rainwater Collection (requiring Exempt Well)." To qualify for a Rooftop Precipitation Collection System Permit, you must satisfy these conditions:

- The property on which you collect the rainwater is residential property.
- You have a permit to use an exempt well, or you are legally entitled to an exempt well for the water supply.
- You collect rainwater only from the rooftop of your domestic residence.
- You use the water only for those uses that are allowed by, and identified on your well permit.

Rainwater collection under HB09-1129

Another special circumstance outlined in Colorado HB09-1129 allows developers to participate in pilot projects that harvest rainwater and put it to beneficial, though non-essential, use in the subdivision. These projects may only operate according to an engineered plan, submitted to the state engineer for approval and eventually, to the water court. Individual landowners are not eligible for these pilot projects.

Concerns about Mosquitos

In order to prevent rain barrels from becoming mosquito breeding grounds, it is important to follow several best practices. First, although any container can be used to collect rainwater, House Bill 16-1005 requires the container to be equipped with a sealable lid. Fortunately, many rain barrels that can be purchased online or from a local home supply store have lids. Second, the rain barrel should be completely emptied every month (or less). If you plan to be away from the home for more than a week, you should disconnect your rain barrel from the downspout.

Concerns about Water Quality

Rain in urban and industrialized areas may contain various impurities absorbed from the atmosphere, including arsenic and mercury. In Colorado, rain is infrequent, but rainwater quality is generally good. However, the infrequency of rainfall results in accumulation of bird droppings, dust and other impurities on rooftops between rain events. The presence of these impurities in collected rainwater is affected by roofing materials, pitch, and area and may occur in high concentrations when it does rain. Heavy metals such as cadmium, copper, lead, zinc, and chromium have been detected in rainwater collected from rooftops. The phenomenon of acid rain can also cause chemical compounds to be leached from roofing materials.

The best strategy is to filter and screen out contaminants before they enter the storage container. Dirty containers may also become a health hazard or a breeding ground for insects and other pests. Various methods can be used to purify rainwater. First-flush diverters ensure a certain degree of water quality in harvested rainwater. The first several gallons of runoff from a gutter, roof, or other surface are likely to contain various impurities such as bird droppings and dust. A first-flush device prevents this initial flow from draining into the storage tank. Many first-flush devices have a simple design. Such devices include tipping buckets that dump when water reaches a certain level. In addition, there are containers with a ball that floats with the rising water to close off an opening after an inflow of 5 gallons. Water is then diverted to a pipe leading to the storage container. This use of simple technology is an attractive feature of rainwater harvesting. Roof washing is not needed for water used solely for irrigation purposes.

Due to concerns surrounding microbial contamination of harvested rainwater, it is not recommended as a source of drinking water for humans. However, properly designed, constructed, and maintained systems that include disinfection steps have been successfully used for private domestic water supplies.

Homeowner's Association Rain Barrel Restrictions

A homeowner's association (HOA) cannot ban the use of rain barrels by its members, however it can impose "reasonable" aesthetic requirements about the location and/or appearance of rain barrels. For example, an HOA may require that rain barrels be placed in backyards and/or be a certain color that blends into the outdoor landscape.

Frequently Asked Questions (FAQs)

Q. Do I Need a Permit to Use Rain Barrels?

The passage of HB16-1005 allows the use of two rain barrels without the need for obtaining a special permit, as long as the collected precipitation is used for outdoor purposes, including irrigation of lawns and gardens. However, if you want to use rain barrels as described and allowed by SB09-080, you will need to obtain a rainwater collection permit from the Colorado Division of Water Resources.

Q. Can I send downspout water onto my garden?

Yes. This situation is acceptable as long as rainwater is directed from the rooftop to the garden.

Q. How much irrigation could I expect to accomplish with rain barrels?

Each time you collect the maximum 110 gallons of water allowed in rain barrels, you can adequately irrigate approximately 180 square feet (a bit smaller than a 15 foot by 15 foot area) of vegetable garden or lawn area with the captured water. This estimate is based on CSU Extension recommendations to water lawns and vegetables gardens with about 1 inch of water during each irrigation cycle. However, a typical rain barrel user can only expect the rain barrels to completely fill about 10-15 times during the growing season, while vegetable gardens and lawns need to be irrigated at least twice as times per year depending on watering practices. Thus, supplemental irrigation will still be necessary to maintain a healthy lawn and vegetable garden.

Q. Can I use rainwater to water my horse/sheep/chickens?

HB16-1005 permits rainwater collection specifically for landscape uses only. Therefore, rainwater collected in rain barrels as allowed by HB16-1005 cannot be used for animal watering. However, rainwater collected in rain barrels as allowed by a Rooftop Precipitation Collection System Permit issued under SB09-080 can be used for animal watering, but only if the exempt well permit allows animal watering. Refer to the Rain barrel use under SB09-080 section above for more detail.

Q. Can I water an attached greenhouse? Can I water houseplants? What's the line between many houseplants and a greenhouse? Is a sunroom with plants legal?

HB16-1005 permits rainwater collection specifically for outdoor uses. The basic SB09-080 permit stipulating "ordinary household use in one single-family dwelling (no outside use)" would support a reasonable understanding of "ordinary household use in one single-family dwelling (no outside use)" that includes watering of typical household plants in a sunroom or otherwise, especially if the water is taken from indoors. The SB09-080 permit would NOT allow for watering plants in a greenhouse where such a building is specifically dedicated to growing plants. There is no definitional line between "many houseplants" and a greenhouse, unless obviously the greenhouse is an attached room or detached building used specifically dedicated to growing plants.

Q. Can I wash my car with collected rainwater?

HB1005 states that captured rainwater must be used on the same property from which the rainwater was captured, for outdoor purposes only. This could include uses such as washing your car on your property. Permits authorized under SB09-080 stipulate "ordinary household use" in one single-family dwelling (no outside use) and would NOT allow for car washing. Such use is limited to drinking and sanitary uses inside the home.

Q. Can I fill my outdoor hot tub with rainwater?

No. The permit authorized under SB09-080 stipulating "ordinary household use" would NOT allow the use of captured rainwater to fill an outdoor hot tub. This includes single-family or multiple dwelling unit situations.

> An appropriation is made when an individual physically takes water from a stream or well (when legally available) and puts that water to beneficial use. The first person to appropriate water and apply that water to use has the first right to that water within a particular stream system. This person, after receiving a court decree verifying their priority status, then becomes the senior water right holder and that water right must be satisfied before any other water rights are filled. In Colorado, the state engineer and director of the Colorado Division of Water Resources, has the statutory obligation to protect all vested water rights. The process of allocating water to various water users is traditionally referred to as water rights administration, and is the responsibility of the Division of Water Resources.

Q. Can I flush my toilet with rainwater?

HB16-1005 permits rainwater collection specifically for nonpotable outdoor uses only. Therefore, rainwater collected in rain barrels as allowed HB16-1005 cannot be used for flushing toilets. However, flushing toilets would be considered "ordinary household use" and rainwater collected in rain barrels as allowed by a Rooftop Precipitation Collection System Permit issued under SB09-080 would be allowed.

Q. Can I put a dog – water dish outside? Can I wash my windows outside? Can I empty used water outside? Can I water a pot of flowers by my front door?

There are endless scenarios that are both humorous and pedantic. The basics of rainwater collection in Colorado are that it may be collected and used for lawns, gardens and landscapes. If you have a permit for rainwater collection under SB09-080, you may use the rainwater as a substitute for water that would ordinarily be pumped from your private exempt well and subject to the limitations of your well permit.

References and additional resources

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Colorado State University, U.S. Department of Agriculture and Colorado counties cooperating. CSU Extension programs are available to all without discrimination. No endorsement of products mentioned is intended nor is criticism implied of products not mentioned.

ORDINANCE OF THE
CITY OF LONE TREE

Series of 2017 **Ordinance No. 17-01**

AN ORDINANCE AMENDING CHAPTER 11 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE AND AMEND THE DOUGLAS COUNTY ROADWAY AND DESIGN STANDARDS; AMEND THE BUILDING MATERIALS ARTICLE; ADD NEW ARTICLES REGARDING STREET AND PEDESTRIAN LIGHTING AND PUBLIC RIGHTS OF WAY; AND PROVIDE FOR PENALTIES

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LONE TREE, COLORADO:

ARTICLE 1 – AUTHORITY

The City of Lone Tree (the "City") is a home rule municipality operating under the Lone Tree Home Rule Charter (the "Charter") adopted on May 5, 1998 and a Municipal Code (the "Code"), codified and adopted on December 7, 2004. Pursuant to the Charter, the Municipal Code and the authority given home rule cities, the City may adopt and amend Ordinances.

ARTICLE 2 – DECLARATIONS OF POLICY

A. The City Council recognizes the need to revise from time to time the Streets, Sidewalks and Public Property Chapter of the Municipal Code and to provide for penalties for violations in order to promote and protect the public health, safety and welfare.

B. The City Council wishes to ensure that the City is up to date in its roadway design and construction standards and regulates materials stored on public streets and sidewalks.

C. The City Council also desires to clarify and set standards and requirements for street and pedestrian lighting and for construction in public rights of way.

ARTICLE 3 – SAFETY CLAUSE

The City Council hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare.

ARTICLE 4 – REPEAL AND ADOPTION

Articles III and IV of Chapter 11 of the Municipal Code are hereby repealed in their entirety and new Articles III, IV, VI and VII are adopted as attached to this Ordinance as Exhibit A.

ARTICLE 5 – CAUSES OF ACTION RETAINED

Nothing in this Ordinance or in the provisions hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this Ordinance.

ARTICLE 6 - SEVERABILITY

If any part or provision of this Ordinance, or its application to any person or circumstance is adjudged to be invalid or unenforceable, the invalidity or unenforceability of such part, provision or application shall not affect any of the remaining parts, provisions or applications of this Ordinance which can be given the effect without the invalid provision, part or application, and to this end the provisions and parts of this Ordinance are declared to be severable.

ARTICLE 7 - EFFECTIVE DATE

This Ordinance shall take effect thirty (30) days following publication after the first reading if no changes are made on second reading, or twenty (20) days after publication following second reading if changes are made upon second reading.

INTRODUCED READ AND ORDERED PUBLISHED ON JANUARY 3, 2017.

PUBLISHED IN THE DOUGLAS COUNTY NEWS PRESS ON JANUARY 12, 2017, LEGAL NOTICE NO. 930471.

APPROVED AND ADOPTED WITH NO CHANGES ON SECOND READING ON JANUARY 17, 2017, TO BECOME EFFECTIVE ON FEBRUARY 11, 2017.

CITY OF LONE TREE:

_____
Jacqueline A. Millet, Mayor

ATTEST:

(SEAL)

_____
Jennifer Pettinger, CMC, City Clerk

EXHIBIT A

CHAPTER 11 Streets, Sidewalks and Public Property

ARTICLE III Roadway Design and Construction Standards

Sec. 11-3-10. Adoption by reference: Roadway Design and Construction Standards.

(a) The Douglas County Roadway Design and Construction Standards, as amended, revised and updated from time to time, is hereby adopted by reference and incorporated into this Article as though fully set forth herein as the City of Lone Tree Roadway Design and Construction Standards. Except as otherwise provided, this code is adopted in full.

(b) One (1) copy of the Douglas County Roadway Design and Construction Standards, as amended by this Chapter, shall be on file in the office of the City Clerk and may be inspected by any interested person between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, holidays excepted. This code, as adopted and amended, shall be available for sale to the public at the City offices, at a price reflecting the cost to the City.

Sec. 11-3-20. Amendments.

The Douglas County Roadway Design and Construction Standards is amended as follows:

(1) The following terms, when used in the codes being adopted, shall have the following meanings:

Authority means the City Council of the City of Lone Tree.

Jurisdiction means the City of Lone Tree.

(2) Where the term *Douglas County* or *County or unincorporated area of Douglas County or unincorporated Douglas County* is found, the term *City of Lone Tree* or *City* shall be substituted; for example, where the term *County Engineer* is used, the term *Director of Public Works or his/her designated representative* shall be substituted.

(3) Where the term *Board of County Commissioners* is found, the term *City Council* shall be substituted, unless the context refers to a specific action previously taken by the Douglas County Board of County Commissioners.

(4) Where the term *Department of Public Works, Road and Bridge Division, Engineering Division or Inspection Department* is used, whether standing alone or modified by *Douglas County* or *County*, the term *Public Works Department* shall be substituted.

(5) Where the term *Director of Engineering Service, Engineer*, or *Inspector* is used, whether standing alone or modified by *Douglas County* or *County*, the term *Director of Public Works or his/her designated representative* shall be substituted.

(6) Where the term *Planning or Building* is used, whether standing alone or modified by *Division, Douglas County,* or *County,* the term City of Lone Tree Community Development shall be substituted.

(7) Where the *Douglas County Roadway Design and Construction Standards* reference sections of the Douglas County *Storm Drainage Design and Technical Criteria* ("*Drainage Manual*"), those references shall be interpreted to apply to the applicable sections of the current version of the *Drainage Manual.*

(8) Where the term *Blueline Copies* is used relative to plans submittals, the current industry standard for paper copy prints may be submitted.

(9) Where reference is made to one or more of the following, the applicable City of Lone Tree forms (where available), as published on the City Website, shall be substituted: *Submittal Form; Certification Notes; Acceptance Block; Required Notes; Forms.*

(10) Where the term *Douglas County Board of Commissioners* is used in the Douglas County Code in reference to approval for temporary road or lane closures, the term *Director of Public Works or his/her designated representative* shall be inserted.

(11) Section 2.1.6.3 of the Douglas County Code shall be revised to substitute the word "*typical"* in place of "*maximum"*.

(12) Section 2.2.1 of the Douglas County Code is amended to note that the initial approval period will be 24 months maximum, or less if so stated in other adopted Codes or standards relative to the specified plans, reports or documents.

(13) Section 2.3.8 of the Douglas County Code (Erosion and Sedimentation Control Plans) shall be amended to reference the City of Lone Tree adopted Grading, Erosion and Sediment Control (GESC) regulations.

(14) Chapter 9 of the Douglas County Code shall amended as necessary to comply with and incorporate the City of Lone Tree Asphalt Pavement Patchback (ST-01) and/or Concrete Pavement Patchback (ST-02) details, as published on the City Website.

(15) Chapter 10 (Permit Procedures and Suretying Requirements) of the Douglas County Code shall be amended as necessary to incorporate the following: City of Lone Tree Public Works, current address and phone number; Right of Way/Construction Permit Fee is as currently adopted and published by the City.

(16) Sections 10.1.12 and 10.12 (*Licensing*) of the Douglas County Code is not adopted.

(17) Where the term *Surety* is used (e.g. Section 10.4.1 of the Douglas County Code), the terms Company (Corporate) or *Cashier's Check or Irrevocable Letter of Credit* shall be substituted.

(18) Section 15.4 (Alternate Standards) of the Douglas County Code shall be amended by deletion of the remainder of the last paragraph of the section, starting with “A County Engineering Inspector will not inspect ….”.

Sec. 11-3-30. Stop work orders.

Any person, corporation, quasi-governmental agency, special district, mutual company, electric, gas or communication utility corporation, who, without first having obtained a permit and/or who having made a cut in a public right-of-way which has settled, has failed or which has not been repaired in conformance with established City standards, shall be subject to a "Stop Work Order" issued by the City whereupon that person, corporation or utility shall, except for emergency repair work, discontinue all work within public rights-of-way within the City until such time as the required repair has been satisfactorily completed. No further permits will be issued until the repair has been made, and/or the City reimbursed for its expenses. The City may, on its own initiative, make required repairs and bill the responsible contractor. Minimum charge shall be a three-hundred-dollar administrative charge, plus costs for labor, materials and equipment on a portal-to-portal basis.

Sec. 11-3-40. Purpose.

Pursuant to Section 31-16-205, C.R.S., the following description of the Standards is provided: The purpose of the Roadway Design and Construction Standards is to provide minimum design and technical criteria for the analysis and design of roadway facilities. These standards include submittal procedures for drawings and specifications, submittal requirements for construction plans, design and technical criteria for roadways, pavement, bridges and major drainage structures, criteria for record drawings, roadway inspection and testing procedures, construction guidelines, trench backfill/compaction guidelines, permit procedures and surety requirements for contractors, acceptance procedures and requirements, utility locations, access requirements and criteria, cost estimating for public improvements, and policies concerning private roads.

Sec. 11-3-50. Violations; penalties.

Any person, firm or corporation violating any of the provisions of this Article or any code incorporated herein shall be deemed guilty of a misdemeanor, and any such person, firm or corporation shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation is committed, continued or permitted. Upon conviction of any such violations, such person, firm or corporation shall be punished by a fine of not more than one thousand dollars ($1,000.00) or by imprisonment for not more than one (1) year, or by both such fine and imprisonment. The issuance or granting of a permit or approval of plans and specifications shall not be deemed or construed to be a permit for or an approval of, any violation of any provisions of the Codes adopted herein.

ARTICLE IV Building Materials

Sec. 11-4-10. Temporary storage or staging of building materials on public streets and sidewalks.

(a) No person may place, locate, deposit, store or stage home improvement, construction or landscaping materials or other tangible property intended to be used on residential property for home improvement, construction or landscaping purposes ("building materials") on a public street, as defined in Section 16-36-20 of this Code, or a public sidewalk without first obtaining a permit from the City.

(b) A person may submit to the City an application for a permit to temporarily store or stage building materials on a public street or sidewalk. The application shall:

(1) State the names of the owner and, if different from the owner, the occupant of the residence to which the building materials will be delivered.

(2) State the address of the residence to which the building materials will be delivered.

(3) Describe in detail the item or items to be stored or staged on the public street or sidewalk, the purpose for which the item or items will be stored or staged, and the area, including approximate dimensions, of the public street or sidewalk that will be occupied by the item or items; and

(4) State the length of time needed to store or stage the item or items.

(c) The Director of Public Works or his or her designee shall review the application and may issue a permit, subject to conditions, intended to decrease any risk that the building materials may pose or to ensure that traffic or other lawful passage is not impeded on the public street or sidewalk. Conditions may include, but are not limited to, a time limit for storing or staging the building materials on the public street or sidewalk, a requirement that the applicant install applicable erosion control devices and traffic control as per plans approved by the City, and a requirement that the applicant clean up and restore the storage or staging area after the building materials are removed.

Sec. 11-4-30. Violations; penalties.

A violation of any provision of this Article shall be punishable by a fine of not more than five hundred dollars ($500.00) per day per violation, plus court and administrative costs, as applicable. Each violation shall be deemed a separate offense for purposes of assessing a fine. In addition, the City may cause the removal of building materials, from a public street or sidewalk that are located or stored in violation of this Article and the costs of such removal shall be imposed upon the owner of the building materials.

ARTICLE VI Street and Pedestrian Lighting

Sec. 11-6-10. Purpose.

(a) Purpose. The purpose of this Article is to ensure that street and pedestrian lighting installed in the City rights-of-way is designed to complement the surrounding area while promoting and

protection the public health, safety, and welfare by assisting motorists and by providing improved illumination.

Sec. 11-6-20. Acceptable Streetlights.

(a) All newly installed street and pedestrian lights shall meet the currently approved City of Lone Tree street lighting design standards. All lights shall be on a separately metered system.

(b) At the completion of construction, the person or entity responsible for constructing street and pedestrian lights shall apply to the City for inspection and acceptance of the installed lights. After any discrepancies have been resolved, the City shall accept the installed lights in the right-of-way for ownership and maintenance.

Sec. 11-6-30. Locations.

(a) No street light shall project into any roadway so as to obstruct or inhibit traffic.

(b) Street and pedestrian lights shall be installed in areas outside of sidewalks, unless absolutely necessary and as approved by the City prior to construction. In the case where any street or pedestrian light is allowed to be located on a sidewalk, it shall be designed and installed in such a manner as to not obstruct the passage of pedestrians and shall comply with the Americans with Disabilities Act, as amended.

(c) All new or replacement street or pedestrian lights shall be installed with underground electrical service.

ARTICLE VII Public Rights of Way

Division 1 - Permits

Sec. 11-7-10. - Purpose.

(a) Purpose. The purpose of this Article is to establish principles, standards and procedures for the placement of facilities, construction, excavation, encroachments and work activities within, under or upon any public right-of-way and to protect the integrity of the City's street system.

(b) Objectives. In the interests of the general welfare, public and private uses of public rights-of-way should be accommodated; however, the City must ensure that the primary purpose of the public right-of-way, passage of pedestrian and vehicular traffic, is protected. The use of the public rights-of-way by private users is secondary to these public objectives. This Article's objectives are to:

(1) Minimize public inconvenience.

(2) Protect the City's infrastructure investment by establishing repair standards for the pavement, facilities and property in the public rights-of-way.

(3) Standardize regulations and thereby facilitate work within the rights-of-way.

(4) Maintain an efficient permit process.

(5) Conserve and fairly apportion the limited physical capacity of public rights-of-way held in public trust by the City.

(6) Establish a public policy for enabling the City to discharge its public trust consistent with the rapidly evolving federal and state regulatory policies, industry competition and technological development.

(7) Promote cooperation among permittees and the City in the occupation of the public rights-of-way, and work therein, in order to eliminate duplication of facilities that is wasteful, unnecessary or unsightly; lower the permittees' and the City's costs of providing services to the public; and minimize street cuts.

(8) Protect the public health, safety and welfare.

Sec. 11-7-20. - Definitions.

For purposes of this Article, the following terms shall have the following meanings:

Access structure means any structure providing access to facilities in the public right-of-way.

Approved alignment means the designed horizontal and vertical alignment of facilities to be installed in the public right-of-way which is approved by the City at the time the permit is issued, plus any alignment variance tolerances set forth in the Construction and Excavation Standards and any alignment variances approved by the City in accordance with the Construction and Excavation Standards.

Construction and Excavation Standards means the document entitled *Construction and Excavation Standards for Work in Public Rights-of-Way*, as adopted by resolution of the City Council and amended from time to time.

Contractor means a person, partnership, corporation or other legal entity which undertakes to construct, install, alter, move, remove, trim, demolish, repair, replace, excavate or add to any improvements or facilities in the public right-of-way, or that requires work, workers or equipment to be in the public right-of-way in the process of performing the above-named activities.

Developer means the person, partnership, corporation or other legal entity improving a parcel of land within the City and being legally responsible to the City for the construction of infrastructure within a subdivision or as a condition of a building permit.

Emergency means any event which may threaten public health or safety, or that results in an interruption in the provision of service, including but not limited to damaged or leaking water or gas conduit systems, damaged, obstructed or leaking sewer or storm drain conduit systems and damaged electrical and communications facilities.

Excavate or *excavation* means to dig into or in any way remove or penetrate any part of a public right-of-way, including trenchless excavation such as boring, tunneling and jacking.

Facilities means any pipe, conduit, wire, cable, amplifier, transformer, fiber optic cable, antenna, pole, streetlight, duct, fixture, appurtenance or other like equipment used in connection with transmitting, receiving, distributing, offering and providing utility and other services, whether above or below ground.

Infrastructure means any public facility, system or improvement, including water and sewer mains and appurtenances, storm drains and structures, streets, alleys, traffic signal poles and appurtenances, conduits, signs, landscape improvements, sidewalks and public safety equipment.

Landscaping means grass, ground cover, shrubs, vines, hedges, trees and nonliving natural materials commonly used in landscape development, as well as attendant irrigation systems.

Major installation means work in the public right-of-way involving an excavation exceeding five hundred (500) feet in length.

Permit means an authorization for use of the public rights-of-way granted pursuant to this Division.

Permittee means the holder of a valid permit issued pursuant to this Division.

Public right-of-way means any public street, way, place, alley, sidewalk, easement, park, square, median, parkway, boulevard or plaza that is dedicated to public use.

Routine maintenance means maintenance of facilities or landscaping in the public right-of-way which does not involve excavation, installation of new facilities, lane closures, sidewalk closures or damage to any portion of the public right-of-way.

Work means any labor performed within a public right-of-way or any use or storage of equipment or materials within a public right-of-way, including but not limited to excavation; construction of streets, fixtures, improvements, sidewalks, driveway openings, bus shelters, bus loading pads, streetlights and traffic signal devices; construction, maintenance and repair of all underground facilities, such as pipes, conduit, ducts, tunnels, manholes, vaults, cable, wire or any other similar structure; maintenance of facilities and installation of overhead poles used for any purpose. Notwithstanding the foregoing, *work* shall not include routine maintenance.

Sec. 11-7-30. - Authority.

(a) A permittee's rights hereunder shall at all times be subject to the authority of the City, which includes the power to adopt and enforce ordinances, including amendments to this Division, necessary for the safety, health and welfare of the public.

(b) The City reserves the right to exercise its authority, notwithstanding any provision in this Division or any permit to the contrary. Any conflict between the provisions of any permit and any other present or future lawful exercise of the City's police power shall be resolved in favor of the latter.

Sec. 11-7-40. - Developer ownership of infrastructure.

The construction of infrastructure in new developments is the responsibility of the developer. Once a public right-of-way has been dedicated to the City, all work in that public right-of-way, including the installation of new infrastructure by a developer, shall be subject to this Chapter.

Sec. 11-7-50. - Permit required.

(a) No person except an employee or official of the City or a person exempted by contract with the City shall undertake or permit to be undertaken any work in a public right-of-way without first obtaining a permit from the City as set forth in this Division. Copies of the permit and associated documents shall be maintained on the work site and available for inspection upon request by any officer or employee of the City.

(b) No permittee shall perform work in an area larger or at a location different, or for a longer period of time than that specified in the permit. If, after work is commenced under an approved permit, it becomes necessary to perform work in a larger or different area or for a longer period of time than what the permit specifies, the permittee shall notify the City immediately and shall file a supplementary application for the additional work within twenty-four (24) hours.

(c) Permits shall not be transferable or assignable without the prior written approval of the City.

(d) Any person conducting any work within the public right-of-way without having first obtained the required permit shall immediately cease all activity and obtain a permit before work may be resumed, except for emergency operations.

Sec. 11-7-60. - Permit application.

(a) An applicant for a public right-of-way permit shall file a written application on a form furnished by the City, which includes the following information:

(1) The date of application.

(2) The name, address and telephone number of the applicant and any contractor or subcontractor which will perform any of the work.

(3) A plan showing the work site, the public right-of-way boundaries, all infrastructure in the area and all landscaping in the area.

(4) The purpose of the proposed work.

(5) A traffic control plan in accordance with the Construction and Excavation Standards.

(6) The dates for beginning and ending the proposed work, proposed hours of work and the number of actual work days required to complete the project.

(b) The applicable permit fees shall accompany the application when submitted.

(c) For any work in the public right-of-way which includes excavation, in addition to the information required by Subsection (a) hereof, the application shall include the following information:

(1) An itemization of the total cost of construction, including labor and materials but excluding the cost of any facilities being installed.

(2) Copies of all permits (including required insurance, deposits, letters of credit, and warranties) required to do the proposed work, whether required by federal or state law or City resolution, ordinance or regulation.

(d) In addition to the information required by Subsections (a) and (c) hereof, an applicant for a public right-of-way permit for a major installation shall submit the following information:

(1) Field-verified locates of all existing facilities required to be located by the Construction and Excavation Standards, which locates shall be compiled and submitted according to the Construction and Excavation Standards.

(2) Engineering construction drawings or site plans for the proposed work in a format acceptable to the City and signed by a professional engineer licensed in the State, except that an applicant expressly exempt from the signature requirement pursuant to Section 12-25-103, C.R.S., need not include the signature of a licensed professional engineer.

(e) An applicant shall update a permit application within ten (10) days after any material change occurs.

(f) Applicants may apply jointly for permits to work in public rights-of-way at the same time and place. Applicants who apply jointly for permits may share in the payment of the permit fees. Applicants must agree among themselves as to the portion each shall pay, and if no agreement is reached, payment in full shall be required of all applicants.

(g) The applicant for a public right-of-way permit shall be the contractor performing the work.

(h) By signing an application, the applicant is certifying to the City that the applicant is in compliance with all other permits issued by the City and that the applicant is not delinquent in any payment due to the City for prior work. This certification shall not apply to outstanding claims which are honestly and reasonably disputed by the applicant, if the applicant and the City are negotiating in good faith to resolve the dispute.

Sec. 11-7-70. - Blanket maintenance permits.

(a) A public right-of-way permit shall not be required for routine maintenance in the public right-of-way, as the term *routine maintenance* is defined in Section 11-3-20. However, other maintenance operations within the public right-of-way which involve traffic lane closures or sidewalk closures shall require a public right-of-way permit. To expedite the process for ongoing maintenance operations, owners of facilities within the public right-of-way may, at their sole option and in the alternative to obtaining individual public right-of-way permits, obtain a blanket maintenance permit pursuant to this Section.

(b) A blanket maintenance permit shall be valid from the date of issuance of the permit through December 31 of the same year. Under no circumstances shall a blanket maintenance permit be valid for more than one (1) year.

(c) A blanket maintenance permit shall not, under any circumstances, authorize any pavement disturbance or installation of new facilities. Notwithstanding the foregoing, existing facilities may be removed and replaced with new facilities, if no excavation or pavement disturbance is required.

(d) Any person seeking a blanket maintenance permit shall file an application on a form provided by the City which includes the following information:

(1) The date of application.

(2) The name, address and telephone number of the applicant.

(3) A general description of the maintenance operations.

(4) Any location of maintenance operations known at the time of application.

(5) Traffic control plans as required by this Section and the Construction and Excavation Standards.

(e) The applicable permit fee as set by the Construction and Excavation Standards shall accompany the application when submitted.

(f) Blanket maintenance permits shall be subject to applicable provisions of the Construction and Excavation Standards.

Sec. 11-7-80. - Permit fees.

(a) Before a public right-of-way permit is issued, the applicant shall pay to the City a permit fee, which shall be determined in accordance with the fee schedule contained in the Construction and Excavation Standards. Permit fees shall be reasonably related to the costs of managing the public rights-of-way. These costs include, but are not limited to, the costs of issuing right-of-way permits, verifying right-of-way occupation, mapping right-of-way occupation, inspecting work, administering this Division and, if applicable, costs relating to restoration of the public right-of-way to remedy degradation of that public right-of-way caused by the permittee.

(b) Restoration fees.

(1) Restoration fees shall only be charged to the applicant if the applicant chooses not to perform the required restoration of the public right-of-way to the City's standards, making the City responsible for performing the required restoration. The applicant shall decide at the time of application whether the applicant will perform the required restoration, and the applicant's decision shall be final.

(2) No restoration fees shall be required for a public right-of-way permit which does not include excavation.

(3) Restoration fees collected by the City shall be placed in a separate account for general street maintenance and construction.

(4) Restoration fees may be waived in the City's discretion when additional circumstances exist which would make restoration unnecessary, such as poor street quality or proposed street resurfacing or construction by the City. These circumstances are outlined in more detail in the section of the Construction and Excavation Standards addressing permit fees.

Sec. 11-7-90. - Insurance.

(a) Unless otherwise specified in a franchise agreement or maintenance or license agreement between a permittee and the City, prior to the granting of any permit, the permittee shall carry and maintain in full effect at all times the following insurance coverage:

(1) Commercial general liability insurance, including broad-form property damage, completed operations contractual liability, explosion hazard, collapse hazard, underground property damage hazard, commonly known as XCU, for limits not less than one million dollars ($1,000,000.00) each occurrence for damages of bodily injury or death to one (1) or more persons; and five hundred thousand dollars ($500,000.00) each occurrence for damage to or destruction of property.

(2) Workers compensation insurance as required by state law.

(b) The permittee shall file with the City proof of such insurance coverage in a form satisfactory to the City.

(c) Upon prior written approval of the City, a permittee may provide self-insurance with the minimum coverage limits set forth in Paragraphs (a)(1) and (a)(2) hereof.

Sec. 11-7-100. - Indemnification.

(a) Each permittee, for himself or herself and his or her related entities, agents, employees, subcontractors and the agents and employees of said subcontractors shall hold the City harmless and defend and indemnify the City, its successors, assigns, officers, employees, agents and appointed and elected officials from and against all liability or damage and all claims or demands whatsoever in nature and reimburse the City for all its reasonable expenses, including reasonable attorney fees and costs, as incurred, arising out of any work or activity in the public right-of-way, including but not limited to the actions or omissions of the permittee, its employees, representatives, agents, contractors, related entities, successors and assigns or the securing of and the exercise by the permittee of any rights granted in the permit, including any third-party claims, administrative hearings and litigation, whether or not any act or omission complained of is authorized, allowed or prohibited by this Division or other applicable law. A permittee shall not be obligated to hold harmless or indemnify the City for claims or demands to the extent that they are due to the negligence or willful and wanton acts of the City or any of its officers, employees or agents.

(b) Following the receipt of written notification of any claim, the permittee shall have the right to defend the City with regard to all third-party actions, damages and penalties arising in any way out of the exercise of any rights in the permit. If at any time, however, a permittee refuses to defend the City, and the City elects to defend itself with regard to such matters, the permittee shall pay all expenses incurred by the City related to its defense, including reasonable attorney fees and costs.

(c) If a permittee is a public entity, the indemnification requirements of this Section shall be subject to the provisions of the Colorado Governmental Immunity Act.

(d) If any provision of this Section conflicts with any provision of a valid, effective franchise agreement between the permittee and the City, the conflicting provision of this Section shall

not apply to the franchisee, and the franchisee shall instead honor the provision of the franchise agreement.

(e) If any provision of this Section conflicts with any provision of a valid, effective median maintenance agreement between a special district and the City, the conflicting provision of this Section shall not apply to the special district, and the special district shall instead honor the provision of the median maintenance agreement.

Sec. 11-7-110. - Letters of credit and other City accepted sureties.

(a) Before a public right-of-way permit is issued, the applicant shall file with the City surety, (allowable sureties include a company (corporate) check, cashier's check or irrevocable letter of credit), in favor of the City in an amount equal to the total cost of construction, including labor and materials but excluding the cost of any facilities being installed, or five thousand dollars ($5,000.00), whichever is greater. The surety shall be executed by the applicant as principal and by at least one (1) surety upon whom service of process may be had in the State. The surety shall be conditioned upon the applicant fully complying with all provisions of City ordinances, resolutions and regulations and upon payment of all judgments and costs rendered against the applicant for any violation of any City resolution, regulation or ordinances or state law arising out of any negligent or wrongful acts of the applicant in the performance of work pursuant to the permit.

(b) The City may bring an action on the surety on its own behalf or on behalf of any person so aggrieved as beneficiary.

(c) The letter of credit shall be approved by the City prior to the issuance of the permit. The City may waive the requirements of any such letter of credit upon finding that the applicant has financial stability and assets located in the State to satisfy any claims intended to be protected against by the security required by this Section.

(d) A letter of responsibility, in a form acceptable to the City, shall be accepted from special districts and governmental agencies in lieu of a surety.

(e) A blanket surety of sufficient amount to cover all proposed work during the upcoming year may be filed with the City on an annual basis in lieu of the project-specific performance sureties or letters of credit required by Subsection (a) hereof. The form and amount of the blanket surety shall be subject to the prior review and approval of the City. Should the blanket surety be deemed insufficient by the City based on the work to date, the City may require additional, project-specific performance sureties or letters of credit pursuant to Subsection (a) hereof.

(f) The performance surety, blanket surety, letter of credit or letter of responsibility shall remain in force and effect for a minimum of two (2) years after completion and acceptance of the street cut, excavation or lane closure.

(g) If any provision of this Section conflicts with any provision of a valid, effective franchise agreement between the applicant and the City, the conflicting provision of this Section shall not apply to the franchisee, and the franchisee shall instead honor the provision of the franchise agreement.

(h) If any provision of this Section conflicts with any provision of a valid, effective maintenance agreement between a special district and the City, the conflicting provision of this Section shall not apply to the special district, and the special district shall instead honor the provision of the median maintenance agreement.

Sec. 11-7-120. - Warranty.

(a) A permittee, by acceptance of the permit, expressly warrants and guarantees complete performance of the work in a manner acceptable to the City and in accordance with this Division and the Construction and Excavation Standards and warrants and guarantees all work done for a period of two (2) years after the date of probationary acceptance.

(b) Under the warranty, the permittee shall, at its own expense, repair or replace, at the discretion of the City, any portion of the work that fails, is defective, is unsound or is unsatisfactory because of but not limited to design, engineering, materials or workmanship.

(c) The warranty period shall begin on the date of the City's probationary acceptance of the work. If repairs are required during the warranty period, those repairs need only be warranted until the end of the initial two-year period starting with the date of probationary acceptance.

(d) At any time prior to completion of the warranty period, the City may notify the permittee in writing of any needed repairs. If the defects are determined by the City to be an imminent danger to the public health, safety and welfare, the permittee shall begin repairs within twenty-four (24) hours of receipt of the written notice and continue the repairs until completion. Nonemergency repairs shall be completed within thirty (30) days after notice.

(e) The warranty shall cover only those areas of work performed by the permittee which provided the warranty and not directly impacted by the work of any other permittee or the City. If a portion of work warranted by a permittee is subsequently impacted by work of another permittee, another user of the right-of-way or the City during the warranty period, the other permittee or the City, as applicable, shall assume responsibility for repair to the subsequently impacted portion of the public right-of-way.

Sec. 11-7-130. - Inspections.

(a) At a minimum, the following four (4) inspections shall take place:

(1) Preconstruction inspection. The permittee shall request that the City conduct a preconstruction inspection, to determine any necessary conditions for the permit.

(2) Completed work inspection. The permittee shall notify the City immediately after completion of work. The City shall inspect the work within twenty-one (21) days of the permittee's notification. Probationary acceptance shall be made if all work complies with this Division, the Construction and Excavation Standards and any other applicable City regulation, ordinance or resolution. Written notice of probationary acceptance shall be sent to permittee listed on the permit application.

(3) Warranty inspection. Approximately thirty (30) days prior to the expiration of the two-year warranty period, the City shall conduct a final inspection of the work. If the work is still satisfactory, the letter of credit shall be returned or allowed to expire, and the City shall issue a notice of final acceptance.

(4) Utility marking inspection. The City shall conduct a utility marking inspection pursuant to Division 2 of this Chapter.

(b) Upon review of the application for a permit, the City shall determine how many additional inspections, if any, may be required. Required inspections shall be listed on the permit. For a permit which does not include excavation, the City may waive any or all of the above-listed inspections.

Sec. 11-7-140. - Time of completion.

(a) All work covered by the permit shall be completed within the time period stated on the permit, unless an extension has been granted by the City in writing; in which case, all work shall be completed within the time period stated in the written extension. An extension may be assessed a charge and additional fees.

(b) Permits shall be void if work has not commenced within thirty (30) days after issuance, unless an extension has been granted by the City in writing. The permittee shall submit a written request for such extension, and the City shall either grant or deny the request within five (5) days of receipt of the request.

Sec. 11-7-150. - Locate information.

(a) Any person owning facilities in the public right-of-way shall provide field locate information to the City and any other permittee with a valid public right-of-way permit which authorizes locate pothole excavation or other excavation work. Within seven (7) days of receipt of a written request from the City or such a permittee, the facility owner shall field locate facilities in the public right-of-way in which the work will be performed.

(b) For major installations, a permittee shall obtain a public right-of-way permit to locate other existing facilities as provided in the Construction and Excavation Standards. The location of such facilities shall be field-verified in a manner approved by the City.

(c) Before beginning excavation in any public right-of-way, a permittee shall contact the Utility Notification Center of Colorado (UNCC) and, to the extent required by Section 9-1.5-102, et seq., C.R.S., make inquiries of all ditch companies, utility companies, districts, local governments and all other agencies that might have facilities in the area of work to determine possible conflicts. The permittee shall contact the UNCC and request field locates of all facilities in the area pursuant to UNCC requirements. Field locates shall be marked prior to commencing work.

Sec. 11-7-160. - Newly resurfaced and constructed streets.

(a) For newly resurfaced and constructed streets, no excavation in the pavement shall be permitted within two (2) years of the completion of the resurfacing or construction.

(b) The City shall publish once, in a newspaper of general circulation in the City each year, a list of those streets that will be resurfaced or constructed in that year. The list shall also be published on the City's website.

(c) Exemption. In rare circumstances, the City may grant an exemption from this Section in accordance with the following procedures:

(1) A request for exemption shall be in writing on a form acceptable to the City and shall contain the following information, at a minimum:

a. A detailed and dimensional engineering plan that identifies and accurately represents all public rights-of-way and other property that will be impacted by the proposed work and the method of construction.

b. The location, width, length and depth of the proposed excavation.

c. A statement as to how any of the criteria set forth in Paragraph (c)(2) hereof apply to the proposed work.

(2) Criteria for approval. In determining whether an exemption should be granted, the City shall consider the following criteria:

a. Whether alternative utility alignments that do not involve excavating in the street are available.

b. Whether the proposed excavation can reasonably be delayed until after the two-year period has elapsed.

c. Whether duct, conduit or other facilities are reasonably available from another user of the public right-of-way.

d. Whether the proposed work involves joint trenching or joint use and the number of users to share in the trenching or use.

e. Whether the proposed work is to be by horizontal boring, tunneling or open trenching.

f. Whether applicable law requires the applicant to provide service to a particular customer and whether denial of the exemption would prevent the applicant from providing such service.

g. Whether the purpose of the proposed work is to provide service to a particular building or a customer within a building who has requested such service and whether denial of the exemption would prevent the applicant from providing such service.

h. Whether the work is limited to locate potholing to provide locate information.

(d) Exemptions for emergency operations. Emergency operations in newly resurfaced or constructed streets shall be permitted.

Sec. 11-7-170. - Reimbursement of City costs.

(a) The City may make any repairs necessary to eliminate any imminent danger to the public health or safety without notice to any permittee, at the responsible permittee's expense.

(b) For any work not performed by a permittee as directed by the City, but not constituting imminent danger to the public health or safety, the City shall provide written notice to the permittee, ordering that the work be corrected within ten (10) days of the date of the notice. If the work is not corrected within the ten-day period, the City may correct the work at the permittee's expense.

(c) Costs of any work performed by the City pursuant to this Section shall be billed to the permittee. The permittee shall also be responsible for any direct costs incurred by the City. The permittee shall pay all such charges within thirty (30) days of the statement date. If the permittee fails to pay such charges within the prescribed time period, the City may, in addition to taking other collection remedies, seek reimbursement through the surety. Furthermore, the permittee may be barred from performing any work in the public right-of-way, and under no circumstances will the City issue any further permits of any kind to said permittee, until all outstanding charges (except those outstanding charges that are honestly and reasonably disputed by the permittee and being negotiated in good faith with the City) have been paid in full.

Sec. 11-7-180. - Landscaping.

(a) All hardscape and landscaping installed within the City right of way shall be the responsibility of the adjacent homeowners' association, property association, or special district. The City shall only be responsible for the maintenance and repair of streets, curbs, gutters, approved street lights, and sidewalks.

(b) Maintenance of landscaping within the right of way for all properties with the exception of single-family detached shall adhere to Section 16-2-210.

(c) Single-family detached properties and platted subdivisions shall adhere to the requirements in this section.

(d) Any roadway pavers installed within the City right of way shall be the responsibility of the homeowners' association or special district that installed the pavers. The City will require

execution of a maintenance or license agreement which will establish responsibility of the pavers.

Sec. 11-7-190. - Penalties.

(a) If any contractor or permittee is found guilty of or pleads guilty to a violation of this Division, he or she shall be punished as provided in Chapter 1, Article 4. Each and every day or portion thereof during which a violation is committed, continues or is permitted shall be deemed a separate offense.

(b) In addition to or in lieu of the penalties set forth in Subsection (a) hereof, the City may impose the following monetary penalties:

(1) For any occupancy of a travel lane or any portion thereof beyond the time periods or days set forth in the traffic control plan approved by the City:

a. In arterial and collector streets during the hours of 6:30 a.m. through 8:30 a.m. and 3:30 p.m. through 6:00 p.m., Monday through Friday: one hundred dollars ($100.00) for each fifteen (15) minutes, or portion thereof, for a maximum of three thousand dollars ($3,000.00) per day.

b. In arterial and collector streets during any time other than the times specified in Subparagraph (b)(1)a. hereof, or in local streets at any time: fifty dollars ($50.00) for each fifteen (15) minutes, or portion thereof, for a maximum of one thousand five hundred dollars ($1,500.00) per day.

(2) For commencing work without a valid permit: five hundred dollars ($500.00), plus twice the applicable permit fee.

(3) For facilities installed outside of the approved alignment: ten dollars ($10.00) per linear foot. This penalty shall not be imposed if the facilities are removed or relocated to comply with the approved alignment or the facilities are abandoned per City approval or the alternate alignment is approved by the City.

(4) For any other violation of a permit: two hundred fifty dollars ($250.00) per violation, with no maximum amount.

(c) The penalties set forth in this Section shall not be the City's exclusive remedy for violations of this Division and shall not preclude the City from bringing a civil action to enforce any provision of a public right-of-way permit or to collect damages or recover costs associated with any use of the public rights-of-way. Furthermore, the enforcement of one (1) penalty shall not preclude the City from enforcing any other penalty.

Division 2 - Utility Markings

Sec. 11-7-210. - Definitions.

For the purposes of this Division, the following terms shall have the following meanings:

Permittee means the holder of a valid permit issued pursuant to this Division.

Public right-of-way means any public street, way, place, alley, sidewalk, easement, park, square, median, parkway, boulevard or plaza that is dedicated to public use.

Utility marking means a mark made of colored or metallic paint or similar material or utilizing any adhesive material of whatever description or a flag or similar removable device or item used by a public utility or its agent in a public right-of-way to mark the existing or future location of pipelines, cables, poles, wires or other similar features.

Sec. 11-7-220. - Removal of utility markings required.

All utility markings shall be fully and completely removed or camouflaged from public rights-of-way utilizing a method that is least destructive to the existing improvements, and which method has been approved by the City. The removal shall occur no later than forty-five (45) days after completion of the work. The right-of-way permittee or other persons (not under a City permit) that originally caused the utility markings to be placed shall be solely responsible for removal of the utility marking.

Sec. 11-7-230. - Penalty.

Any person who is convicted of a violation of this Division shall, upon conviction, be punished by a fine not to exceed the maximum fine allowed under Chapter 1 of this Code. Each day such violation is committed or continues shall constitute a separate offense. As an additional means of enforcement, and not as an alternative to or substitute for prosecution for violation of this Division, the City may remove or eradicate any utility markings which are not removed pursuant to this Division and bill the party responsible for such removal the full cost incurred by the City to effect such removal. Any such costs incurred shall be immediately due and payable, and failure to pay such costs in full within thirty (30) days of billing therefor by the City shall subject the responsible party to interest on the unpaid balance at the rate of twelve percent (12%) per annum, compounded monthly. Any requests for future permits by such permittee shall be denied until all unpaid balances are paid in full.

ORDINANCE OF THE
CITY OF LONE TREE

Series of 2017 **Ordinance No. 17-02**

AN ORDINANCE AMENDING CHAPTER 15 OF THE MUNICIPAL CODE TO ADOPT BY REFERENCE THE 2017 FLOOD INSURANCE STUDY FOR DOUGLAS COUNTY AND ACCOMPANYING FLOOD INSURANCE RATE MAPS, DIGITAL FLOOD RATE MAPS AND FLOOD BOUNDARY FLOODWAY MAPS; AMEND STORMWATER DISCHARGE DEFINITION; ADD A NEW ARTICLE REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AND PROVIDE FOR PENALTIES

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LONE TREE, COLORADO:

ARTICLE 1 – AUTHORITY

The City of Lone Tree (the "City") is a home rule municipality operating under the Lone Tree Home Rule Charter (the "Charter") adopted on May 5, 1998 and a Municipal Code (the "Code"), codified and adopted on December 7, 2004. Pursuant to the Charter, the Municipal Code and the authority given home rule cities, the City may adopt and amend Ordinances.

ARTICLE 2 – DECLARATIONS OF POLICY

A. The City Council recognizes the need to revise from time to time the legal underpinnings of the Public Works Department in its regulation, oversight and enforcement of flood damage protection within the City in order to promote and protect the public health, safety and welfare.

B. The City Council wishes to ensure that the City continues to be in compliance with the Federal Emergency Management Agency's National Flood Insurance Program.

C. Douglas County's Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM), as adopted by the City of Lone Tree, has been updated, effective February 17, 2017. As a result, the City needs to amend its associated Flood Plain ordinances to reflect the new FIS and FIRM, in order to stay current with the FEMA National Flood Insurance Program (NFIP).

D. The City Council also finds it more appropriate to include clearing, grading and land disturbance requirements into the Public Works Chapter of the Municipal Code, as opposed to the Zoning Chapter, as they apply to more than just zoning issues and regulations.

ARTICLE 3 – SAFETY CLAUSE

The City Council hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare.

ARTICLE 4 – ADOPTION

A. Section 15-1-50 of the Code is repealed and replaced by the following:

Sec. 15-1-50. Adoption by reference: Flood Insurance Study for Douglas County, Colorado and Incorporated Areas.

(a) The Flood Insurance Study for Douglas County, Colorado and Incorporated Areas, a scientific and engineering report by the Federal Emergency Management Agency, dated February 17, 2017, as amended, revised and updated from time to time, with accompanying Flood Insurance Rate Maps, Digital Flood Rate Maps and Flood Boundary Floodway Maps, and any revisions thereto, is hereby adopted by reference and incorporated into this Article as though fully set forth herein. Except as otherwise provided, this Flood Insurance Study is adopted in full.

(b) One (1) copy of The Flood Insurance Study for Douglas County, Colorado and Incorporated Areas, dated February 17, 2017, as amended, revised and updated from time to time, with accompanying Flood Insurance Rate Maps, Digital Flood Rate Maps and Flood Boundary Floodway Maps, and any revisions thereto, certified to be a true copy by the Mayor and City Clerk, shall be on file in the office of the City Clerk and may be inspected by any interested person between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, holidays excepted. This Flood Insurance Study, as adopted and amended, shall be available for sale to the public at the City offices at a price reflecting the cost to the City.

B. The definition of *Nonstormwater discharge* in Section 15-2-10 of the Code is repealed and replaced by the following:

Sec. 15-2-10. Definitions.

Nonstormwater discharge means any discharge to the MS4 that is not composed entirely of stormwater, except as specifically allowed herein. *Nonstormwater discharges* may include, but are not limited to: soil sediments from erosion of soils at construction sites; excessive nutrients such as nitrates and phosphates; paints, varnishes and solvents; oil and other automotive fluids; nonhazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter or other discarded or abandoned objects and accumulations that may cause or contribute to pollution; floatables; pesticides, herbicides and fertilizers; hazardous materials and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal

wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind. *Nonstormwater discharges* specifically do not include landscape irrigation, lawn watering, diverted stream flows, irrigation return flow, rising groundwaters, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, springs, flows from riparian habitats and wetlands, water line flushing in accordance with the Colorado Department of Public Health and Environment's Low Risk Discharge Guidance: Potable Water, discharges from potable water sources in accordance with the Colorado Department of Public Health and Environment's Low Risk Discharge Guidance: Potable Water, foundation drains, air conditioning condensation, water from crawl space pumps, footing drains, individual residential car washing, dechlorinated swimming pool discharges in accordance with the Colorado Department of Public Health and Environment's Low Risk Discharge Guidance: Swimming Pools, water incidental to street sweeping (including associated sidewalks and medians) and that is not associated with construction, dye testing in accordance with the manufacturer's recommendations, stormwater runoff with incidental pollutants, discharges resulting from emergency firefighting activities, discharges authorized by (a) separate Colorado Discharge Permit System (CDPS) or National Pollutant Discharge Elimination System (NPDES) permit, agricultural stormwater runoff, and discharges that are in accordance with the Colorado Department of Public Health and Environment Water Quality Control Division Low Risk Discharge Guidance documents, as amended.

C. Section 15-3-50 is repealed and replaced by the following:

Sec. 15-3-50. Basis for establishing the special flood hazard areas; adoption by reference.

The special flood hazard areas (SFHAs) identified by the Federal Emergency Management Agency in a scientific and engineering report, entitled "The Flood Insurance Study for Douglas County, Colorado and Incorporated Areas," dated February 17, 2017, as amended from time to time, with accompanying Flood Insurance Rate Maps (FIRMs), Digital Flood Rate Maps (DFIRMs) and Flood Boundary Floodway Maps (FBFMs), and any revisions thereto, are hereby adopted by reference and declared to be a part of this Chapter. These SFHAs identified by the Flood Insurance Study (FIS) and attendant mapping are the minimum area of applicability of this Article and may be supplemented by studies designated and approved by the City. The City Clerk and Floodplain Administrator shall keep a copy of the Flood Insurance Study (FIS), DFIRMs, FIRMs and FBFMs on file and available for public inspection.

D. A new Chapter 15, Article V, Clearing, Grading and Land Disturbance, is hereby adopted as follows:

ARTICLE V Clearing, Grading and Land Disturbance

Sec. 15-5-10. Intent.

The purpose of this Article is to:

(1) Provide a mechanism for the issuance of permits relating to clearing, grading and earth movement so as to limit soil erosion and sedimentation during and after construction; and

(2) Control nonpoint-source pollution by requiring the implementation of soil erosion and sedimentation control practices for protection of water quality, soil surfaces during and after construction and lands identified as having high open space, visual or vegetative value.

Sec. 15-5-20. Permits required.

(a) A grading permit shall be required from the Engineering Division for any of the following uses:

(1) Grading.

(2) Stripping of soil or vegetation.

(3) Depositing fill material.

(4) Trenching or excavating;

(5) Constructing public or private facilities.

(b) For single-family residential development, a permit may be issued upon approval of a preliminary plan by the City Council. However, a permit may be issued upon the approval of the Community Development Director and the Director of Public Works or his/her designated representative, on a case-by-case basis, prior to approval of a preliminary plan.

(c) For all uses that require an approved Site Improvement Plan, (SIP), a permit may be issued upon approval of the SIP. However, a permit may be issued upon the approval of the Director and the Director of Public Works or his/her designated representative, on a case-by-case basis, prior to approval of a SIP.

(d) A permit may be issued for construction activities not subject to the platting or site improvement plan review process with the approval of the Director of Public Works or his/her designated representative, (i.e., road construction, utility lines).

Sec. 15-5-30. Permits not required.

(a) Permits are not required for the following uses:

(1) Grading in an area of one (1) acre or less which is isolated and self-contained, when the Director of Public Works or his/her designated representative determines that such grading will not have a negative impact upon private or public property. When a negative impact is identified, the provisions of this Article shall apply.

(2) An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. Any fill made with the material from such excavation and any excavation having an unsupported height greater than five (5) feet after the completion of such structure shall be required to have a grading permit.

(3) Individual cemetery gravesites.

(4) Routine agricultural uses of agricultural land.

(5) Exploratory excavations of less than five hundred (500) square feet (excluding mining activity) at the direction of a soil engineer or engineering geologist.

(6) A fill less than one (1) foot in depth and placed on natural terrain with a slope flatter than five (5) horizontal feet to one (1) vertical foot (5:1), or less than three (3) feet in depth, not intended to support structures, which does not exceed fifty (50) cubic yards on any one (1) lot and does not obstruct a drainage course.

(b) Even if a permit is not required, any clearing, grading or land disturbance activities shall be in accordance with the standards set forth in the City's duly adopted Storm Drainage Design and Technical Criteria manual and those set forth in this Article.

Sec. 15-5-40. Review issues.

Any land-disturbing activity is subject to review by the City and other appropriate agencies regarding:

(1) Significant wildlife habitat.

(2) Archaeological or historical sites.

(3) Lands identified as having high open space, visual or vegetative value.

(4) Geologically sensitive areas.

(5) Riparian or wetland areas.

(6) Unique or distinctive topographic features or other issues as may be identified in the Comprehensive Plan, or Chapter 17 of this Code and other Articles of this Chapter.

Sec. 15-5-50. Minimum standards.

All erosion and sediment control plans and specifications for activities which disturb soil or vegetation shall meet, at a minimum, the following criteria:

(1) Plans shall be prepared in accordance with the City's duly adopted Storm Drainage Design and Technical Criteria and Grading, Erosion and Sediment Control Manuals, as amended, and shall be prepared or supervised by a professional engineer licensed in Colorado or a certified professional erosion and sediment control specialist trained and experienced in soil erosion and sedimentation control methods and techniques. Erosion control measures shall be implemented such that the following standards of performance are met:

(2) In addition to the specific performance standards in Paragraph (1) above, all plans shall be prepared and adhered to so that land-disturbing activities shall not:

a. Result in or contribute to soil erosion or sedimentation that would interfere with any existing drainage course in such a manner as to cause damage to any adjacent property;

b. Result in or contribute to deposition of debris or sediment on any private or public property not designed or designated as an area to collect said sediment;

c. Create any hazard to any persons or property; or

d. Detrimentally influence the public welfare or the development of any watershed.

(3) Technical methodologies to meet the standards set forth in Paragraphs (1) and (2) above are described in the City's duly adopted Storm Drainage Design and Technical Criteria manual.

Sec. 15-5-60. Submittal requirements.

Applicants for a grading permit shall submit the appropriate review fees and an erosion and sedimentation control plan to the Director of Public Works or his/her designated representative which plan shall, at a minimum, contain the information detailed in the City's duly adopted Storm Drainage Design and Technical Criteria and Grading, Erosion and Sediment Control manuals and the following:

(1) A vicinity map, at a maximum scale of 1" = 2,000', indicating the site location, as well as the adjacent properties within five hundred (500) feet of the site boundaries.

(2) A boundary survey or site property lines shown in true location with respect to topographic information.

(3) A plan of the site, at a maximum scale of 1" = 200', on a 24" x 36" sheet showing:

a. Name, address and telephone number of the landowner, developer and petitioner.

b. Existing topography (shown by dashed lines) having maximum contour intervals of two (2) feet, unless otherwise specified by the Director of Public Works or his/her designated representative.

c. Proposed topography (shown by solid lines) having contour intervals of two (2) feet, unless otherwise specified by the Director of Public Works or his/her designated representative, including spot elevations.

d. Location of existing structures and natural features, such as stream channels, stands of trees, rock outcroppings, wetlands, historical/archaeological sites, significant wildlife habitats, vegetative stands and potential open space land as identified in the Comprehensive Plan, on the site, adjacent to the site and within one hundred (100) feet of the site boundary line.

e. Location of proposed structures or development on the site, if known.

f. Elevations, including spot elevations if buildings are shown, dimensions, location, extent and slope of all proposed grading, including building and driveway grades.

g. Plans and timing schedule for all temporary or permanent erosion control measures to be constructed with or as a part of the proposed work, including drainage facilities, retaining walls, cribbing and plantings. The timing schedule shall assure that the standards set forth in Section 15-5-50 above are adhered to from the commencement of construction. In preparing the site plan, the applicant shall use the soil erodibility zone classifications in the Storm Drainage Design and Technical Criteria manual, the soil classification data for the site identified by the U.S. Soil Conservation Service in the published Soil Survey, or the data which is collected, analyzed and reported upon by a qualified soils engineer registered in the State.

(4) A written report which includes the following:

a. A schedule indicating the anticipated project starting and completion dates, the time of overlot grading, construction phases and completion for vegetative and structural control measures.

b. A statement of the quantity of excavation and fill involved, source of the fill material and the total area of land surface to be disturbed.

c. Estimated itemized and total cost of the required temporary and permanent soil erosion control measures, which estimates shall include quantities and unit costs.

(5) Other information or data as may be required by the Director of Public Works or his/her designated representative, such as a soil investigation report which shall include, at a minimum, data regarding the nature, distribution and supporting ability of existing soils and rock on the site.

Sec. 15-5-70. Submittal process.

(a) All plans shall be submitted to the Engineering Division. Incomplete or otherwise inadequate application submittals shall be returned to the applicant with comments. The applicant shall comply with the provisions of this Article.

(b) The Engineering Division shall review and comment and either accept the plan or return the plan to the applicant within twenty (20) working days from the date the application submittal was determined to be complete. If the Engineering Division cannot review the plan within twenty (20) days, the applicant will be so notified. The Engineering Division and the applicant may mutually agree upon an extension of time for completion of the plan review or for retention of a qualified professional to perform the review. The applicant shall be responsible for all costs associated with the review.

(c) In the event the applicant desires to amend the plan, an amended plan which complies with the requirements set forth in Sections 15-5-50 and 15-5-60 above shall be submitted by the applicant and reviewed by the Engineering Division prior to the commencement of any work pursuant to the amended plan.

Sec. 15-5-80. Expiration of permit.

A permit shall be effective for twelve (12) consecutive months from the date of issue. Prior to the expiration date, the permit may be renewed upon approval by the Director of Public Works or

his/her designated representative for a period of time not to exceed twelve (12) months. Two additional extensions of six months per extension may be granted by the Director of Public Works or his/her designated representative. Any further extensions may require the applicant to request City Council approval.

Sec. 15-5-90. Appeals process.

If the applicant disagrees with the decision of the Engineering Division, the applicant may appeal to the City Council. The appeal shall be based on technical data or other relevant information. The City Council may affirm, modify or reverse the findings, conclusions and decision of the Engineering Division or remand the decision to the Engineering Division for further review and findings.

Sec. 15-5-100. Fees.

(a) A nonrefundable filing fee shall be paid to the Engineering Division at the time of application.

(b) Any person, corporation, partnership, firm or other entity applying for a grading permit after commencement or completion of the activities authorized in said permit shall be required to pay double the standard fee.

Sec. 15-5-110. Security.

(a) To ensure rehabilitation of the disturbed area, the applicant shall furnish a letter of credit or other form of security acceptable to the City, naming the City as the secured party in an amount and type to be determined by the Director of Public Works or his/her designated representative based upon the magnitude of the land-disturbing activities and rehabilitation requirements. The amount of security will be one hundred fifteen percent (115%) of the cost estimate set forth in Section 15-5-60(4) or one hundred fifteen percent (115%) of the cost to vegetate the disturbed land to dryland grasses based upon unit costs determined by the Director of Public Works or his/her designated representative, whichever is greater. Due to the complexities of erosion control, in no instance shall the amount of security be less than two thousand five hundred dollars ($2,500.00), except as provided in Paragraph 15-5-30(a)(1). The Director of Public Works or his/her designated representative shall have the right to call on the security in the event the schedules required in Subparagraphs 15-5-60(3)g and 15-5-60(4)a are not met.

(b) No erosion and sedimentation control permit(s) will be approved without the submittal of the required security.

(c) The City will accept a cash escrow or letter of credit as security. The cash escrow or letter of credit will be returned to the applicant within sixty (60) days after the completion of the land-disturbing activity and closure of the permit. Completion shall mean the achievement of the final stabilization of the land as indicated on the erosion and sedimentation control plan. Completion shall be determined by a representative of the Director of Public Works or his/her designated representative who shall notify the applicant in writing. The warranty period for erosion control construction shall be two (2) growing seasons.

(d) Prior to final release, the Director of Public Works or his/her representative may grant a reduction of the security.

Sec. 15-5-120. Insurance.

Every applicant, before commencing operations, shall be insured to the extent of two hundred thousand dollars ($200,000.00) per person, five hundred thousand dollars ($500,000.00) per occurrence, against liability arising from activities or operations conducted or carried on pursuant to any of the provisions of this Chapter, and such insurance shall be kept in full force and effect during the period of such activities or operations, including site rehabilitation. A certificate indicating protection by such insurance shall be filed by the applicant together with his or her application for permit. Said insurance shall not be released until final inspection and approval has been completed by the Engineering Division.

Sec. 15-5-130. Violations.

(a) Any person, corporation, partnership, firm or other entity of whatever description violating any provision of these regulations shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not more than one thousand dollars ($1,000.00), or by imprisonment for not more than ten (10) days, or by both such fine and imprisonment. Each day during which a violation exists shall constitute, and shall be punishable as, a separate offense.

(b) This Article may be enforced by injunction, including both the enjoining of actions or inactions in violation of this Article (i.e., land-disturbing activities undertaken without, or in violation of the terms of, a permit as required herein), and a mandatory injunction to require the removal of excavation or fill accomplished without, or in violation of the terms of, such a permit. In any such injunctive action, the City shall be entitled to an award of its costs of suit and any costs incurred in the removal of fill and/or restoration of areas where fill or excavation activities have been undertaken in violation of the provisions of this Article.

(c) The City shall be entitled to recover its attorney's fees incurred in bringing any action to compel compliance with the provisions of these regulations or to compel compliance with any plan approved hereunder.

Sec. 15-5-140. Stop Work Order.

The Director of Public Works or his/her designated representative is authorized to order work stopped on any project which disturbs the land and which is not in compliance with the provisions of this Article.

Sec. 15-5-150. Abatement.

(a) In the event a landowner determines or discovers that a plan is not being adhered to, said landowner shall take immediate steps to abate said violation and shall notify the Director of Public Works or his/her designated representative of the deviation from the plan and the efforts undertaken to bring the work into compliance with said plan.

(b) In the event the Director of Public Works or his/her designated representative discovers a deviation from the plan, the landowner or authorized representative shall be notified in writing of said deviation and shall be required to bring the work into compliance with the plan. The written notice shall specify the areas of deviation from the plan. Failure to correct the deviation from the plan within the time period provided in the notice shall entitle the City to invoke the provisions of Section 15-5-130 above.

Sec. 15-5-160. Applicability of other laws and regulations.

Nothing contained herein relieves any person, corporation, firm or entity from the obligation to comply with any applicable state or federal laws or regulations relating to water quality or water quality standards or any other standards contained within this Chapter.

ARTICLE 5 - PROVISIONS EFFECTIVE

The provisions of this Ordinance shall go into effect on February 17, 2017.

ARTICLE 6 – CAUSES OF ACTION RETAINED

Nothing in this Ordinance or in the provisions hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this Ordinance.

ARTICLE 7 - SEVERABILITY

If any part or provision of this Ordinance, or its application to any person or circumstance is adjudged to be invalid or unenforceable, the invalidity or unenforceability of such part, provision or application shall not affect any of the remaining parts, provisions or applications of this Ordinance which can be given the effect without the invalid provision, part or application, and to this end the provisions and parts of this Ordinance are declared to be severable.

ARTICLE 8 - EFFECTIVE DATE

This Ordinance shall take effect thirty (30) days following publication after the first reading if no changes are made on second reading, or twenty (20) days after publication following second reading if changes are made upon second reading.

INTRODUCED READ AND ORDERED PUBLISHED ON JANUARY 3, 2017.

PUBLISHED IN THE DOUGLAS COUNTY NEWS PRESS ON JANUARY 12, 2017, LEGAL NOTICE NO. 930474.

APPROVED AND ADOPTED WITH NO CHANGES ON SECOND READING ON JANUARY 17, 2017, TO BECOME EFFECTIVE ON FEBRUARY 11, 2017.

CITY OF LONE TREE:

_____
Jacqueline A. Millet, Mayor

ATTEST:

(SEAL)

_____
Jennifer Pettinger, CMC, City Clerk

ORDINANCE OF THE
CITY OF LONE TREE

Series of 2017 **Ordinance No. 17-03**

AN ORDINANCE AMENDING CHAPTER 16 OF THE MUNICIPAL CODE TO REPEAL ARTICLE XXXI REGARDING CLEARING, GRADING AND LAND DISTURBANCE; AMEND USE AND STRUCTURE RESTRICTIONS NEAR AIRPORTS; ADD A PROVISION REGARDING RAIN BARRELS; AND AMEND AND UPDATE MISCELLANEOUS PROVISIONS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LONE TREE, COLORADO:

ARTICLE 1 – AUTHORITY

The City of Lone Tree (the "City") is a home rule municipality operating under the Lone Tree Home Rule Charter (the "Charter") adopted on May 5, 1998 and a Municipal Code (the "Code"), codified and adopted on December 7, 2004. Pursuant to the Charter, the Municipal Code and the authority given home rule cities, the City may adopt and amend Ordinances.

ARTICLE 2 – DECLARATIONS OF POLICY

A. The City Council recognizes the need to revise from time to time the legal underpinnings of the Zoning Chapter of the Municipal Code, including landscaping and irrigation standards, in order to promote and protect the public health, safety and welfare.

B. The City Council wishes to update provisions related to structures and uses located near airports.

C. The City Council acknowledges that the Director of Public Works is the proper title of the person authorized to oversee certain provisions of this Chapter.

D. The City Council also finds it more appropriate to delete clearing, grading and land disturbance requirements from the Zoning Chapter, as they apply to more than just zoning issues and regulations, and include them into the Public Works Chapter of the Municipal Code.

E. The Community Development Director prepared a preliminary report on the proposed Amendments which was delivered to the Planning Commission for consideration at a public hearing.

F. A public hearing before the Planning Commission was held on December 13, 2016, for which public notice was duly given in compliance with Section 16-1-120 of the Municipal Code. At the hearing, the Planning Commission allowed testimony from the public, reviewed staff reports and the preliminary report, and evaluated the proposed Amendments to the Zoning Chapter.

G. The Planning Commission, through the Community Development Department, prepared a final report containing a recommendation to the City Council for approval of the proposed Amendments.

H. A public hearing before the City Council was scheduled to hear public testimony and consider the proposed Amendments for which public notice was duly given in compliance with Section 16-1-120 of the Municipal Code.

I. The City Council has determined that the proposed Amendments to the Zoning Chapter are in the best interests of the health, safety and welfare of the public and the residents of the City.

ARTICLE 3 – SAFETY CLAUSE

The City Council hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare.

ARTICLE 4 – ADOPTION

A. Section 16-2-110 of the Code is repealed and replaced by the following:

Sec. 16-2-110. Use and structure restrictions.

(a) No structure shall be altered, built or moved, and no structure or land shall be used or occupied, which does not conform to all applicable provisions of this Chapter in which the structure or land is located.

(b) No structure shall be erected, placed upon or extended over any easement unless approved in writing by the agency or agencies having jurisdiction over such easement. A copy of such approval shall be submitted to the Community Development Department prior to building permit issuance.

(c) Applicants are responsible for providing any prior required notice to the Federal Aviation Administration (FAA) of the proposed construction or alteration of a structure that may constitute an obstruction to the safe navigation, landing, or takeoff of aircraft at a publicly used airport, as required by regulations at 14 C.F.R. Part 77. Copies of all written communications with and final determinations by the FAA shall be submitted to the Planning Division prior to approval of a Site Improvement Plan (SIP) application. Upon the issuance

by the FAA of a Determination of No Hazard to Air Navigation which includes mitigation measures, the mitigation measures recommended by the FAA may be required. Upon the issuance by the FAA of a Determination of Hazard to Air Navigation, the SIP application shall be denied.

B. Section 16-2-210 of the Code is repealed and replaced by the following:

Sec. 16-2-210. Property maintenance.

The following provisions apply to all properties except single-family detached:

(1) All improvements on the property shall be maintained in a state of good repair consistent with the approved SIP. This includes proper upkeep and maintenance of all structures, paved surfaces, access, parking areas, lighting, signage and similar improvements.

(2) Landscaping shall be maintained in a neat, clean and healthy condition. This shall include proper pruning, mowing of lawns, weeding, fertilizing, mulching, trimming, removal of litter and regular irrigation of all plantings, as applicable. Should any plant material die or its condition be deteriorated significantly as determined by staff, the owner shall be responsible for the replacement of the plant(s) within one (1) planting season. Dead plant materials shall be removed and replaced with healthy planting materials of comparable size and species as shown on the SIP, and shall meet the original intent of the approved landscape design. Undeveloped properties eligible for a Site Improvement Plan must also be maintained in a state of good repair. This includes regular mowing, weeding, mud and erosion control, as well as trash removal. Clear space above public walks shall be seven (7) feet or greater.

(3) Sidewalks and landscaping in the public right-of-way adjacent to commercial, multi-family or single-family attached properties are the responsibility of the adjoining property owner or managing entity. Sidewalks must be maintained in a condition free from snow or ice within twenty-four (24) hours after its accumulation.

(4) Maintenance access shall be provided to all storm drainage facilities to ensure continuous operational capability of the system. The property owner shall be responsible for the maintenance of all drainage facilities, including inlets, pipes, culverts, channels, ditches, hydraulic structures and detention basins located on the property, unless such maintenance responsibility is provided by an alternate entity, with City approval, through a separate written agreement with a copy on file with the Director of Public Works or his/her designated representative. If the City determines that the property is not in compliance with the above requirements, it may contact the owner to remedy the violations within a timeframe specified by the Director. If the owner fails to remedy the violation in the time specified, the City shall have the right to enter the land for the purposes of operations and maintenance. All such maintenance costs shall be assessed to the property owner.

C. A new Section 16-2-230 of the Code, Rain Barrels, is adopted as follows:

Sec. 16-2-230. Rain Barrels.

The City promotes the benefits of the use of rain barrels while recognizing the need to blend their use into a residential setting. To balance the environmental, drainage and other benefits of rain barrels with the potential for nuisance, aesthetic or other issues that may result from the use of the same, precipitation from a rooftop that is collected in a rain barrel is permitted subject to the following:

(1) A rain barrel collecting precipitation from a downspout is allowed adjacent to any building façade, when the rain barrel is:

(a) Fifty-five (55) gallons or less in capacity;
(b) Blends with the building's façade and surrounding landscaping and vegetation;
(c) Outdoors, above ground, not elevated more than 24 inches above adjacent grade, placed on a stable surface, and maintained in such a way as to prevent tipping;
(d) Secured with a sealable lid;
(e) Maintained in a safe and functional condition and kept in good repair;
(f) Maintained to prevent any offensive odors, any mosquito or other insect eggs and larvae, any other nuisance or any other City code violation; and
(g) Has associated permanent or temporary piping that reasonably blends in with surrounding landscaping and vegetation.

(2) Shall meet all provisions of the State laws, including:
(a) Collection is from a rooftop of a building that is used primarily as a single-family residence (defined as a separate building or an individual residence that is part of a row of residences joined by common sidewalls) or a multi-family residence with four or fewer units;
(b) The collected precipitation is used on the property on which it is collected;
(c) No more than two rain barrels, with a total of one hundred ten (110) gallons of storage, are allowed per residence;
(d) The collected precipitation is used solely for outdoor purposes including the irrigation of lawns and gardens;
(e) Precipitation collected shall not be used for drinking water or indoor household purposes.

D. Section 16-22-40 of the Code is repealed and replaced by the following:

Sec. 16-22-40. Temporary construction office.

A temporary structure for the storage of construction materials and a construction office to be used for managing a construction job shall be allowed in all districts, provided that:

(1) A building permit has been issued for a permanent structure, or, in the case of a road construction project, approval has been granted by the Director of Public Works or his/her designated representative.

(2) The structure is used only during normal construction hours by the construction employees. The structure shall not be used for living quarters.

(3) The structure is located within the area of a recorded plat or an approved Site Improvement Plan.

(4) A permit for a temporary electrical meter has been issued by the Building Division.

(5) The temporary structure shall be removed upon issuance of a certificate of occupancy or completion of the permanent structure.

E. Section 16-22A-80 of the Code is repealed and replaced by the following:

Sec. 16-22A-80. Temporary Use Permit; permitting procedure.

(a) The applicant shall submit the application fee and the information required in Section 16-22A-100 of this Article to the Community Development Department.

(b) The submittal shall be reviewed for completeness and the applicant notified of any inadequacies. Once the submittal is determined complete, the Community Development Department and other agencies such as the Director of Public Works or his/her designated representative, the affected fire district and the health department may be asked to review the application.

(c) After review by applicable departments and referral agencies, the Community Development Department shall approve, approve with conditions, or deny the Temporary Use Permit.

(d) Denial of the Temporary Use Permit may be appealed to the City Council, in writing, within ten (10) days of denial by the Community Development Department.

F. Subsections 16-27-70(b) and (e) of the Code are repealed and replaced by the following:

Sec. 16-27-70. SIP submittal requirements.

(b) Cover Sheet.

(1) Notes or requirements specific to the SIP shall be provided on Sheet 1. Included on all SIPs shall be the following note:

"The property herein is subject to all applicable requirements of the Lone Tree Zoning Code, including but not limited to maintenance, lighting, parking, signage, and outdoor storage, except as may otherwise be addressed in an approved Development Plan or Sub-Area Plan."

(2) A vicinity map at a scale of 1" = 2,000' shall be provided showing the relationship of the site to the surrounding area within a two-mile radius superimposed on a current map of the City that shows streets and lots, keeping the same scale. If the site is within a Planned Development, a filing or Planned Development map at 1" = 1,000' for a one-mile radius shall also be included.

(3) The following approval signature block shall be placed on Sheet 1 of the SIP plan:

APPROVAL CERTIFICATE

THIS SIP HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORD WITH CITY REGULATIONS, AS APPROVED BY THE CITY ON (DATE).

By: _____

Name: _____
Title: Community Development Director

Date: _____

By: _____

Name: _____
Title: Director of Public Works or his/her designated representative

Date: _____

By: _____

Name: _____
Title: Mayor

Date: _____

The owner(s) of the lands described herein, hereby agree(s) (1) to develop and maintain the property described hereon in accordance with this approved Site Improvement Plan and in compliance with Chapter 16 of the Lone Tree Municipal Code and that (2) the heirs, successors and assigns of the owner(s) shall also be bound. The signatures of the owner(s)'(s) representative(s) below indicate that any required authorizations to enter this agreement, including any corporate authorizations, have been obtained.

_____
(Name of Owner)

_____
(Signature of Owner)

_____
(Printed Name and Title)

State of _____)

) ss.

County of _____)

Subscribed and sworn to before me this _____ day of _____, 20___, by _____

Witness my hand and official seal.

My commission expires: _____

_____
Notary Public

Approval by the City of Lone Tree does not signify that the requirements of the Americans with Disabilities Act (ADA) have been satisfied. The applicant is responsible to ensure that said ADA requirements have been met.

(e) Irrigation Plan. The irrigation plan shall be prepared consistent with the standards set forth in Section 16-32-110 of this Chapter. The irrigation plan shall be prepared at a scale of 1" = 40' or 1" = 20' or another scale approved by staff, which allows for maximum clarity of the proposal. Additionally, the irrigation plans shall be the same scale as the landscaping plans. The irrigation plan shall contain the following:

(1) The type of irrigation proposed for each hydrozone based on exposure, plant selection and slope. To conserve on water, irrigated turf shall not be allowed on slopes greater than 3:1. Shrubs or trees irrigated with a drip line are acceptable as is drought-tolerant grasses with temporary irrigation systems for areas with slope greater than 3:1.

(2) The location of the backflow preventer(s).

(3) The location of the master valve.

(4) The location and type of weather-based smart controller(s).

(5) The location of the rain sensor that will override the irrigation cycle of the sprinkler.

G. Subsection 16-27-80(h) of the Code is repealed and replaced by the following:

Sec. 16-27-80. Review process.

(h) Review of building permit applications concurrent with SIP review. For nonresidential, single-family attached or multi-family structures, a building permit shall be issued only when an SIP has been approved. However, with the approval of the Director, an applicant may submit a building permit application to the Building Division concurrent with the SIP application, at which point the permit may be issued upon SIP approval by the City Council. Building permits shall not be issued for any development that is not in conformance with the approved SIP. Approval of construction drawings by the Director of Public Works or his/her designated representative and by any relevant service providers, e.g., utilities or special districts, may be required prior to issuance of building permits.

H. Subsections 16-27-90(c) and (e) of the Code are repealed and replaced by the following:

Sec. 16-27-90. Approval provisions.

(c) Building permit approval. Prior to issuance of a building permit, final approval from the Community Development Department and Director of Public Works or his/her designated representative is required for final SIP approval. Engineering approval may be contingent upon approval of a Grading, Erosion and Sediment Control (GESC) Report and Plan(s); a Drainage Report or Drainage Conformance Letter; Civil Site Development construction plan(s); and/or a Site Improvement Plan Improvements Agreement (SIPIA), as applicable. Submittal of the finally-approved SIP Mylars to the Community Development Department, signed by the applicant, shall be required prior to the issuance of a building permit.

(e) Temporary Certificates of Occupancy.

(1) Temporary occupancy may be granted by a Temporary Certificate of Occupancy (TCO) with site improvements subsequently being completed within the timeframe established in the TCO subject to review and approval by the Building Official or designee. A TCO agreement, signed by the applicant, shall be submitted to the City in a form approved by the Director. The Director may, for good cause shown, grant no more than one (1) extension of not more than six (6) months upon a written request by the applicant prior to the expiration of the TCO.

(2) A TCO may be issued provided that financial security such as an irrevocable letter of credit, a cashier's check or some other City-approved form of payment has been submitted and accepted by the City. This financial security shall be in an amount equal to the cost of the unfinished work plus fifteen percent (15%), and shall be submitted prior to the issuance of a TCO. The financial security will be held by the City and released or reimbursed when the work is deemed complete by the Director and Director of Public Works or his/her designated representative.

I. Subsection 16-27-100(c) of the Code is repealed and replaced by the following:

Sec. 16-27-100. Post-approval submittal and review process.

(c) Financial security and SIPIA.

(1) A Site Improvement Plan Improvements Agreement (SIPIA) and associated surety(ies) may be required in order to guarantee the completion of site improvements and shall specify the nature and timing of the work to be completed. An SIPIA will be required whenever any improvements on or associated with the site are within the public right-of-way or are (or may become) the City's to maintain, and in other circumstances as determined by Public Works.

(2) In order to quantify the required amount of financial security for the required improvements, the City may require the applicant to provide, at no cost to the City, up to three (3) bids from qualified contractors for the applicable required improvements. Alternatively, the City may accept detailed construction cost estimates prepared by and

signed/sealed by the applicant's Professional Engineer and/or Professional Landscape Architect (as applicable based on the work covered by the SIPIA). Based on these quotes and/or estimates, the Director and the Director of Public Works or his/her designated representative shall determine the amount of security required.

(3) Except for force majeure causes, failure by the applicant to complete the work or to request a time extension within the specified time period may result in a forfeiture of the security and may cause the City to initiate the construction of such improvements, as detailed in the SIPIA. Except for force majeure causes, the Director may grant no more than two (2) time extensions of not more than six (6) months each upon receipt of a written request, accompanied by an extension of the financial security. A separate request must be submitted for each requested extension, and such request must be submitted prior to the date the construction was to have been completed.

J. Subsection 16-27-110(c) of the Code is repealed and replaced by the following:

Sec. 16-27-110. SIP amendments.

(c) Additional conditions applied to minor and major amendments.

(1) All amendments must meet the intent of the SIP requirements and the Design Guidelines.

(2) A change in land use does not necessarily require an amendment to the SIP as long as the new use is a use by right in the underlying zone district.

(3) Elements not specifically addressed in the table in Subsection (b) above, such as minor changes to the traffic circulation or drainage, may be considered for administrative amendments upon approval by the City Manager, and when applicable (e.g., for engineering-related items) the Director of Public Works or his/her designated representative.

(4) All applications will be sent to the appropriate referral agencies for comment.

(5) The Director/City Manager reserves the right to forward any application to the Planning Commission and shall forward any application deemed major to the City Council for approval.

(6) If a variance has been granted previously for a specific application, the request may be reviewed by the Planning Commission, as required by the Director.

(7) A "change in architectural character" warranting Planning Commission review includes:

a. Multiple changes to an SIP. Even in cases where no single change exceeds the threshold requiring Planning Commission review, staff will consider the cumulative effect of all the changes.

b. Significant changes to the "skin" or materials used to surface a building, e.g., greater than twenty percent (20%) of the surface area.

c. Significant changes to the color of the building materials.

d. Significant changes in the lines of the architecture, such as significant modification of rooflines.

K. Subsections 16-28-50(d) and (e) of the Code are repealed and replaced by the following:

Sec. 16-28-50. Design standards for parking areas.

(d) Grading. All off-street parking areas shall be properly graded. The Director of Public Works or his/her designated representative must approve the drainage and stormwater detention design.

(e) Surfacing. Each off-street parking area shall be surfaced with asphalt, Portland cement concrete or some other material approved by the Director of Public Works or his/her designated representative.

L. Article XXXI, Chapter 16 of the Municipal Code, Clearing, Grading and Land Disturbances, is hereby repealed in its entirety.

M. Subsection 16-32-60(f) of the Code is repealed and replaced by the following:

Sec. 16-32-60. Parking lot landscaping.

(f) The use of planting strips and shallow landscaped depressions in parking lots and along roads is encouraged to help trap and remove pollutants from storm water runoff as approved by the Director of Public Works or his/her designated representative and the Community Development Department.

N. Section 16-32-110 of the Code is repealed and replaced by the following:

Sec. 16-32-110. Irrigation.

The following irrigation standards shall apply:

(1) All landscaped areas shall be served by a functioning automatic irrigation system.

(2) Temporary irrigation (no more than two [2] seasons) may be used to establish native grasses and native vegetation.

(3) Irrigation systems shall be designed with separate zones for different equipment or water requirements based on exposure, plant selection and slope.

(4) Master valves and backflow preventers are required.

(5) Irrigation systems shall be designed to minimize overspray and runoff onto adjacent impervious surfaces such as roads, sidewalks and parking lots.

(6) Rain sensors are required that will suspend the irrigation cycle when rainfall has occurred in an amount sufficient to negate the need for irrigation at the scheduled time.

(7) The installation of weather-based or soil-moisture-based smart controllers is required and shall be designed, installed and managed to apply the appropriate amount of water to maintain healthy plant material.

O. The definition of *Engineer* in Section 16-36-20 of the Code is repealed and replaced by the following:

Sec. 16-36-20. Definitions.

Engineer means the City's designated Director of Public Works or his/her designated representative as set forth by resolution or other City Council action, to perform the engineering functions for the City as set forth in this Chapter.

ARTICLE 5 - PROVISIONS EFFECTIVE

The provisions of this Ordinance shall go into effect on February 17, 2017.

ARTICLE 6 – CAUSES OF ACTION RETAINED

Nothing in this Ordinance or in the provisions hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this Ordinance.

ARTICLE 7 - SEVERABILITY

If any part or provision of this Ordinance, or its application to any person or circumstance is adjudged to be invalid or unenforceable, the invalidity or unenforceability of such part, provision or application shall not affect any of the remaining parts, provisions or applications of this Ordinance which can be given the effect without the invalid provision, part or application, and to this end the provisions and parts of this Ordinance are declared to be severable.

ARTICLE 8 - EFFECTIVE DATE

This Ordinance shall take effect thirty (30) days following publication after the first reading if no changes are made on second reading, or twenty (20) days after publication following second reading if changes are made upon second reading.

INTRODUCED READ AND ORDERED PUBLISHED ON JANUARY 3, 2017.

PUBLISHED IN THE DOUGLAS COUNTY NEWS PRESS ON JANUARY 12, 2017, LEGAL NOTICE NO. 930475.

APPROVED AND ADOPTED WITH NO CHANGES ON SECOND READING ON JANUARY 17, 2017, TO BECOME EFFECTIVE ON FEBRUARY 11, 2017.

CITY OF LONE TREE:

_____
Jacqueline A. Millet, Mayor

ATTEST:

(SEAL)

_____
Jennifer Pettinger, CMC, City Clerk

ORDINANCE OF THE
CITY OF LONE TREE

Series of 2017 **Ordinance No. 17-04**

AN ORDINANCE AMENDING CHAPTER 17 OF THE MUNICIPAL CODE TO AMEND AND UPDATE MISCELLANEOUS PROVISIONS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LONE TREE, COLORADO:

ARTICLE 1 – AUTHORITY

The City of Lone Tree (the "City") is a home rule municipality operating under the Lone Tree Home Rule Charter (the "Charter") adopted on May 5, 1998 and a Municipal Code (the "Code"), codified and adopted on December 7, 2004. Pursuant to the Charter, the Municipal Code and the authority given home rule cities, the City may adopt and amend Ordinances.

ARTICLE 2 – DECLARATIONS OF POLICY

A. The City Council recognizes the need to revise from time to time the legal underpinnings of the Subdivisions Chapter of the Municipal Code, including administrative procedures and standards, in order to promote and protect the public health, safety and welfare.

B. The City Council acknowledges that the Director of Public Works is the proper title of the person authorized to oversee certain provisions of this Chapter.

C. The Community Development Director prepared a preliminary report on the proposed Amendments which was delivered to the Planning Commission for consideration at a public hearing.

D. A public hearing before the Planning Commission was held on December 13, 2016, for which public notice was duly given in compliance with Section 17-1-120 of the Municipal Code. At the hearing, the Planning Commission allowed testimony from the public, reviewed staff reports and the preliminary report, and evaluated the proposed Amendments to the Subdivisions Chapter.

E. The Planning Commission, through the Community Development Department, prepared a final report containing a recommendation to the City Council for approval of the proposed Amendments.

F. A public hearing before the City Council was scheduled to hear public testimony and consider the proposed Amendments for which public notice was duly given in compliance with Section 17-1-120 of the Municipal Code.

G. The City Council has determined that the proposed Amendments to the Subdivisions Chapter are in the best interests of the health, safety and welfare of the public and the residents of the City.

ARTICLE 3 – SAFETY CLAUSE

The City Council hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare.

ARTICLE 4 – ADOPTION

A. Section 17-1-60 of the Code is hereby repealed.

B. Section 17-1-90 of the Code is amended by adding a new definition of *Subdivision Improvements* and the definition of *Subdivision improvements agreement* or *subdivision agreement* is repealed and replaced by the following:

Sec. 17-1-90. Definitions.

Subdivision Improvements shall mean the street, drainage and other improvements including, but not limited to, landscaping, retaining walls, hardscape, etc., as shown on the approved construction plans.

Subdivision improvements agreement or *subdivision agreement* means one (1) or more security arrangements which the City shall accept to secure the actual cost of construction of such subdivision improvements, as are required by this Chapter or other applicable regulations, within the subdivision. The subdivision improvements agreement (SIA) may include any one (1) or a combination of the types of security or collateral listed in this definition.

C. Section 17-2-10 of the Code is repealed and replaced by the following:

Sec. 17-2-10. Intent.

The following provisions apply to all subdivisions of land in the City to assure the creation of lots which can be developed in conformance with Chapter 15, Chapter 16, and this Chapter 17, the

Building Code, Roadway Design and Construction Standards, Storm Drainage Design and Technical Criteria Manual, design guidelines and other applicable City regulations.

D. Subsection 17-2-20(c) of the Code is repealed and replaced by the following:

Sec. 17-2-20. Description of subdivision process.

(c) Nonresidential. The steps required to obtain approval of a subdivision for nonresidential development includes final plat. In this case, the final plat shall be reviewed by the Planning Commission and reviewed and approved by the City Council. It is an abbreviated process as it does not require preliminary plan review and approval; however, more information on the project is generally forthcoming, as these applications often accompany the site improvement plan for the site.

Review Process	***Preliminary Plan***	***Final Plat***
Single-family detached development	Reviewed by Planning Commission and approved by City Council	Approved by City Manager
Single-family attached and multi-family development	N/A	Reviewed by Planning Commission and approved by City Council
Nonresidential development	N/A	Reviewed by Planning Commission and approved by City Council

E. Sections 17-2-40 through 17-2-100 of the Code are repealed and replaced by the following:

Sec. 17-2-40. Subdivision improvements.

In each subdivision, the City shall determine the type, location and extent of necessary subdivision improvements, depending upon the characteristics of the proposed development and its relationship to surrounding areas. The developer shall provide for the construction, at no cost to the City, of all utilities and other public infrastructure, as required by the City, and provide the

necessary security needed to ensure such improvements are made as determined by the City. Improvements shall be made according to plans and specifications prepared by a qualified professional engineer in accordance with the Roadway Design and Construction Standards, the Storm Drainage Design and Technical Criteria Manual, the Grading, Erosion and Sediment Control Manual, Chapter 15, the Building Code and other applicable regulations. Underground placement of utility lines shall be required in all subdivisions.

Sec. 17-2-50. Streets.

All streets and road rights-of-way shall be constructed in conformance with the roadway standards specified in the Roadway Design and Construction Standards, the Storm Drainage Design and Technical Criteria Manual, the Grading, Erosion and Sediment Control Manual, Chapter 15 and other applicable regulations.

Sec. 17-2-60. Erosion and sediment control plan.

An erosion and sediment control plan shall be submitted which addresses the existing and potential erosion and sediment problems created by the proposed development. Conservation measures used to mitigate these concerns shall be in accordance with Chapter 16 of this Code, the Roadway Design and Construction Standards, the Storm Drainage Design and Technical Criteria Manual and the Grading, Erosion and Sediment Control Manual, and Chapter 15. If applicable, the Soil Conservation District shall be consulted regarding erosion and sediment control.

Sec. 17-2-70. Drainage study.

Drainage studies shall be submitted as part of the subdivision submittal requirements in conformance with the Storm Drainage Design and Technical Criteria Manual and Chapter 15.

Sec. 17-2-80. Other subdivision improvements.

Other reasonable improvements not specifically mentioned herein and found appropriate and necessary by the City shall be constructed at the applicant's expense within such time and in conformance with such specifications as deemed necessary and appropriate.

Sec. 17-2-90. Guarantee of subdivision improvements.

(a) No final plat shall be recorded until the applicant has submitted, and the Public Works Department has reviewed and accepted, one (1) or a combination of the following:

(1) A subdivision improvement agreement to construct any required subdivision improvements shown in the final plat documents and approved construction plans.

(2) Other agreements or contracts setting forth the plan, method and parties responsible for the construction of any required subdivision improvements shown in the final plat documents which, in the judgment of the Public Works Department, will make reasonable provision for completion of said improvements in accordance with design and time specifications.

(3) Documentation that there are no required subdivision improvements associated with the final plat.

(b) When required, the applicant shall provide security, in a form acceptable to the City, for the subdivision improvements as follows:

(1) The applicant shall provide the City with an itemized estimate of the cost of required improvements on a standardized form available from the Public Works Department in accordance with the requirements of the Roadway Design and Construction Standards and the Storm Drainage Design and Technical Criteria Standards. Upon review, the Public Works Department shall require one (1) of the following:

a. Security of one hundred fifteen percent (115%) of the total cost of the required subdivision improvements shall be paid by the applicant prior to the approval of the construction plans and issuance of a construction permit.

b. Security of fifteen percent (15%) of the total cost of required subdivision improvements shall be paid by the applicant prior to the sale or transfer of lots, or issuance of building permits, when the required subdivision improvements have been completed and been granted probationary acceptance by the Public Works Department.

c. No security is required toward the total cost of required subdivision improvements that have been completed and have been granted final acceptance by the Public Works Department (at the end of the two-year probationary period).

(c) The Director of Public Works or his/her designated representative shall review the SIA and the cost estimates and recommend changes as necessary to complete the required improvements.

(d) The City Attorney shall review any modifications made by the applicant to the SIA and notify the applicant of any deficiencies or required changes. The SIA shall be in the form provided by the City Attorney and approved by the City Manager.

(e) The Director of Public Works or his/her designated representative shall monitor the SIA and any performance agreements.

(f) At the discretion of the City Manager, the City may waive the requirement for security by federal, state or local governments, including metropolitan districts, special districts and the like.

Sec. 17-2-100. Release of security.

As improvements are completed, the subdivider may apply to the Public Works Department for a release of part or all of the security. Upon inspection by the Director of Public Works or his/her designated representative and upon their approval, the City shall release the security or portion thereof. If the City determines that any improvements are not constructed in substantial compliance with the specifications, it shall furnish the applicant a list of specific deficiencies and shall retain security sufficient to ensure such compliance. If the City determines that the applicant has not constructed any or all of the improvements in accordance with all of the specifications, the City may withdraw and employ from the deposit of security such funds as may be necessary to

construct the improvement in accordance with the specifications. If the submitted security is not sufficient to cover the improvements, the applicant is responsible for the additional costs. Security to cover the cost of repair of such improvements is required during the warranty period in accordance with the requirements of the subdivision improvements agreement.

F. Subsection 17-5-60 (13) of the Code is repealed and replaced by the following:

Sec. 17-5-60. Final plat exhibit.

(13) The following certifications on a single sheet shall be provided in accordance with Article VIII of this Chapter: Surveyor, Dedication Statement, Storm Drainage Facilities Statement, General Overlot Drainage Note, City Manager, County Clerk and Recorder's office and Title Verification.

G. Section 17-7-70 of the Code is repealed and replaced by the following:

Sec. 17-7-70. - Replat of subdivision where additional lots are created.

Replats of subdivided land, where additional lots are created requires the following review process:

(1) When three (3) or fewer lots are created for single-family detached land use, the replat may be acted on by the City Manager, according to the submittal and review requirements of Article IV of this Chapter.

(2) When more than three (3) lots are created for single-family detached land use, the replat shall be processed in accordance with the submittal and review requirements of Article IV of this Chapter, except that it shall be acted on only by the City Council.

(3) When any lots are created for single-family attached, multi-family or nonresidential land use, the replat shall be acted on only by the City Council, following a 21-day referral period, according to the submittal requirements of Article V of this Chapter. The post-approval procedure and expiration of approval requirements of Article V shall also apply.

ARTICLE 5 – CAUSES OF ACTION RETAINED

Nothing in this Ordinance or in the provisions hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this Ordinance

ARTICLE 6 - SEVERABILITY

If any part or provision of this Ordinance, or its application to any person or circumstance is adjudged to be invalid or unenforceable, the invalidity or unenforceability of such part, provision or application shall not affect any of the remaining parts, provisions or applications of this Ordinance which can be given the effect without the invalid provision, part or application, and to this end the provisions and parts of this Ordinance are declared to be severable.

ARTICLE 7 - EFFECTIVE DATE

This Ordinance shall take effect thirty (30) days following publication after the first reading if no changes are made on second reading, or twenty (20) days after publication following second reading if changes are made upon second reading.

INTRODUCED READ AND ORDERED PUBLISHED ON JANUARY 3, 2017.

PUBLISHED IN THE DOUGLAS COUNTY NEWS PRESS ON JANUARY 12, 2017, LEGAL NOTICE NO. 930476.

APPROVED AND ADOPTED WITH NO CHANGES ON SECOND READING ON JANUARY 17, 2017, TO BECOME EFFECTIVE ON FEBRUARY 11, 2017.

CITY OF LONE TREE:

_____

Jacqueline A. Millet, Mayor

ATTEST:

(SEAL)

_____

Jennifer Pettinger, CMC, City Clerk

ORDINANCE OF THE
CITY OF LONE TREE

Series of 2017 **Ordinance No. 17-05**

AN ORDINANCE AMENDING CHAPTER 18 OF THE MUNICIPAL CODE TO AMEND THE 2012 INTERNATIONAL RESIDENTIAL CODE REGARDING DRAINAGE EROSION SEDIMENT CONTROL PERMITS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LONE TREE, COLORADO:

ARTICLE 1 – AUTHORITY

The City of Lone Tree (the "City") is a home rule municipality operating under the Lone Tree Home Rule Charter (the "Charter") adopted on May 5, 1998 and a Municipal Code (the "Code"), codified and adopted on December 7, 2004. Pursuant to the Charter, the Municipal Code and the authority given home rule cities, the City may adopt and amend Ordinances.

ARTICLE 2 – DECLARATIONS OF POLICY

A. The City Council has adopted the 2012 International Residential Code (IRC), addressing the standards for the design and construction of residential buildings that adequately protects the public health, safety and welfare.

B. The City Council, in adopting the IRC, addressed issues regarding drainage.

C. The City Council believes there is a need to strengthen those provisions to provide for required drainage plan design elements as part of obtaining a Drainage Erosion Sediment Control Permit.

ARTICLE 3 – SAFETY CLAUSE

The City Council hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare.

ARTICLE 4 – ADOPTION

A new Subsection 18-3-40 (12) of the Municipal Code, is hereby adopted as follows, with the remaining Subsections renumbered:

Sec. 18-3-40. Amendments.

(12) Section R401.3, Drainage, is deleted in its entirety and replaced by the following:

R401.3 Projects that Require a Drainage Erosion Sediment Control (DESC) Permit.
City of Lone Tree requires that a DESC Permit be obtained prior to the start of land disturbing activities within the City of Lone Tree for new single family detached homes or an addition to single family detached homes.

R401.3.1 Drainage Plan Design Elements.
The Drainage Plan shall be lot specific, and shall provide the detailed final grading for the lot, and or disturbed area(s). The Drainage Plan shall reflect information provided in the Phase III Drainage Plan for the given area and comply with the following requirements:

1. Slope Requirements. A minimum constant slope of 10% and a maximum constant slope of 33% in the first 10 feet away from the foundation walls and window wells shall be established for pervious surfaces. All other disturbed areas shall have a minimum of 2% slope. All pervious and impervious areas shall slope continuously to the lowest point where stormwater discharges from the lot (e.g., sidewalk, gutter, inlet, adjacent property, or easement). At this point, the discharge water shall be dispersed into a sheet flow and directed in a manner as to not cause harm to downslope properties. Where minimum slopes cannot be attained, alternate means to adequately convey the water from the lot shall be designed and submitted by the Designer to the Building Division for acceptance. Impervious surfaces adjacent to the foundation shall have adequate drainage away from the foundation as determined by the Designer. Refer to the International Residential Code, as amended, for specific requirements.
2. Drainage Swales. Drainage swales may not be located within the foundation backfill zone unless limited by property lines. Drainage swales shall have adequate depth, width and longitudinal gradient to convey the stormwater off the lot in an effective, non-damaging manner. Drainage swales shall be designed to spread flows out as much as feasible.
3. Retaining Walls. Proposed slopes steeper than 3 to 1 are difficult to vegetate and maintain. Long term rill and gully erosion are likely on such slopes. Approved permanent stabilization shall be required to control grades on sites that cannot be graded at a 3 to 1 slope. Retaining walls may be necessary to control grades on a site. Retaining walls shall not encroach onto adjacent properties. Retaining walls taller than 4 feet (including footing) or that carry a surcharge require a separate Building Permit and shall be designed by a Professional Engineer.

4. Driveways. Driveways shall have a minimum slope of 2% away from the foundation for a distance that will allow adequate drainage away from the garage entrance as determined by the Designer.
5. Downspouts and Sump Pumps. Downspouts and sump pumps shall discharge a minimum of 4 feet away from the foundation wall and outside the foundation backfill zone unless limited by property lines. Downspouts shall not directly discharge onto adjacent properties.
6. Designing to the Phase III Drainage Plan. The Designer shall ensure that the Drainage Plan functions in accordance with the Phase III Drainage Plan for the development, if applicable.

R401.3.2 Drainage Plan Requirements.

The Drainage Plan shall be lot specific, and shall provide the detailed final grading for the lot, and or disturbed area(s). The Drainage Plan shall be shown, at a minimum, on 8.5" x 11" or a scale of 1 inch equals 20 feet. The Drainage Plan shall include:

1. Basic property information including; street address, subdivision, filing, lot and block.
2. North Arrow.
3. All property lines, easements and setbacks.
4. 100 Year Floodplain limits shall be shown if there is floodplain on the lot.
5. Spot elevations and drainage flow arrows to accurately illustrate the site drainage patterns. At a minimum the plan shall contain:
   a) Drainage swales labeled with spot elevations to the nearest 1/10 of a foot, and drainage flow arrows, illustrated to the nearest 1%, starting at the high point(s) and along the swale at 25 foot intervals.
   b) Spot elevations, to the nearest 1/10 of a foot at:
      - Each foundation corner.
      - Each point of foundation elevation change.
      - Top of driveway at the garage entrance.
      - Point of driveway discharge.
      - Top of Wall and Bottom of Wall elevations for all retaining walls at each end and at 20 foot intervals.
   c) Slopes illustrated with an arrow showing the direction of flow to the nearest 1%, for a distance of 10 feet from the top of backfill at foundation for:
      - Each foundation corner.
      - Along the foundation at 20 foot intervals.
      - Each point of foundation elevation change.
   d) Additional information (e.g., contours) may be required by the City depending on site specific conditions.
6. Location(s) where existing storm water runoff enters the lot and discharges from the lot to adjacent rights-of-way, properties and easements labeled.
7. Name, address and phone number of the Designer’s firm.
8. DESC Drawing Designer’s signature block with name, date and registration number.

R401.3.3 DESC Inspections.

R401.3.3.1 Final Grade Inspection.
Final Grade inspection shall be made after the permitted work is complete and prior to the issuance of the Certificate of Occupancy.

R401.3.3.2 Other Inspections.
In addition to the called inspection above, the Building Official may make or require any other inspections to ascertain compliance with this code or other laws enforced by the Building Official.

R401.3.4 Final Drainage Certificate.
To ensure conformance with the approved design and to ensure adequate drainage away from the foundation and off the lot, a Final Drainage Certificate shall be certified by a Registered Professional Engineer (PE) or a Registered Professional Land Surveyor (PLS) and approved by the City of Lone Tree before a Certificate of Occupancy can be issued. The following items shall be clearly illustrated on a copy of the approved Drainage Plan:

- All vertical and horizontal deviations to grades, drains, spot elevations, slopes and drainage patterns throughout the lot as shown on the approved DESC Plan.
- Location(s) of the sump pump discharge, if applicable.
- The Final Drainage Certificate shall be signed and stamped by a PE or a PLS.

The Drainage Certificate requirement will be waived for non-habitable accessory structures and small additions if:

- Compliant drainage has been verified by the Inspector during a Final Grade Inspection.

R401.3.5 DESC Permit Closeout.
DESC Permits will be closed at the completion of construction and prior to the approval of the Certificate of Occupancy only when the following conditions are met:

1. All of the previously disturbed soil areas are covered with the building structure, grass/sod, rock, mulch, pavers, or other approved landscape materials; or
2. In the case that landscaping improvements have not been completed, the Permittee(s) shall install the Final Erosion and Sediment Control BMPs shown on the approved DESC Plan. Additional sediment controls may be required at the discretion of the Inspector in order to protect adjacent lots and the storm sewer system.

R401.3.6 Posting Surety.
The City of Lone Tree recognizes that, in some cases, final grading and drainage measures cannot be immediately achieved prior to the need to close a transaction, and occupy a property. In the event that the final grading and drainage measure cannot be completed prior to the need for a Certificate of Occupancy, Surety and a DESC permit fee shall be posted with the Building Division. The Certificate of Occupancy will be released upon receipt of

the Surety and after the Inspector has verified that the Erosion and Sediment Control BMPs are effectively implemented in accordance with the approved DESC Plan.

R401.3.6.1 Amount of Surety.
The amount of Surety required shall be $2,500.00. For lots larger than 1.0 acre, the required Surety shall be $2,500.00 per disturbed acre.

R401.3.6.2 Forms of Surety.
The City of Lone Tree accepts 3 different forms of security. Surety can be deposited as a Corporate or Cashier's Check, Irrevocable Letter of Credit or by Credit Card.

R401.3.6.3 Release of Surety.
Surety will be returned upon completion of the Final Grade inspection and acceptance of the Final Drainage Certification.

ARTICLE 5 – CAUSES OF ACTION RETAINED

Nothing in this Ordinance or in the Residential Code hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this Ordinance.

ARTICLE 6 – SEVERABILITY

If any part or provision of this Ordinance, or its application to any person or circumstance, is adjudged to be invalid or unenforceable, the invalidity or unenforceability of such part, provision, or application shall not affect any of the remaining parts, provisions or applications of this Ordinance which can be given effect without the invalid provision, part or application, and to this end the provisions and parts of this Ordinance are declared to be severable.

ARTICLE 7 - EFFECTIVE DATE

This Ordinance shall take effect thirty (30) days following publication after the first reading if no changes are made on second reading, or twenty (20) days after publication following second reading if changes are made upon second reading.

INTRODUCED READ AND ORDERED PUBLISHED ON JANUARY 3, 2017.

PUBLISHED IN THE DOUGLAS COUNTY NEWS PRESS ON JANUARY 12, 2017, LEGAL NOTICE NO. 930477.

APPROVED AND ADOPTED WITH NO CHANGES ON SECOND READING ON JANUARY 17, 2017, TO BECOME EFFECTIVE ON FEBRUARY 11, 2017.

CITY OF LONE TREE:

_____
Jacqueline A. Millet, Mayor

ATTEST:

_____
Jennifer Pettinger, CMC, City Clerk

(SEAL)