

USD 320-Phase 1-Bid Package 3- 2017 Summer
Work

Addendum 1

Issue Date: 4-6-17

Architect: BBN Architects Inc.

MEP: Orazem & Scalora Engineering, P.A.

Construction Manager: Coonrod & Associates Construction Co., Inc.

Owner: USD 320 Wamego

The attached documents and / or items below shall hereby become part of the Construction Documents for the referenced project above.

ADD1-1: The following sheets were issued as 8.5" x 11" in pdf format, which is incorrect. These sheets have been re-issued as 24" x 36". The **ONLY changes** are to the size of the sheet. Please see attached sheets for correct size.

8th & Poplar: SMH Consultant Sheets 1-7, E101

West Elementary: E101, P101

Wamego Middle School: M101, M102, M103, M105, M106, E101, E102, E201, P101, P102, P201, P202.

ADD1-2: Replace the current specification section with the attached specification section "099123-Interior Painting", in it's entirety.

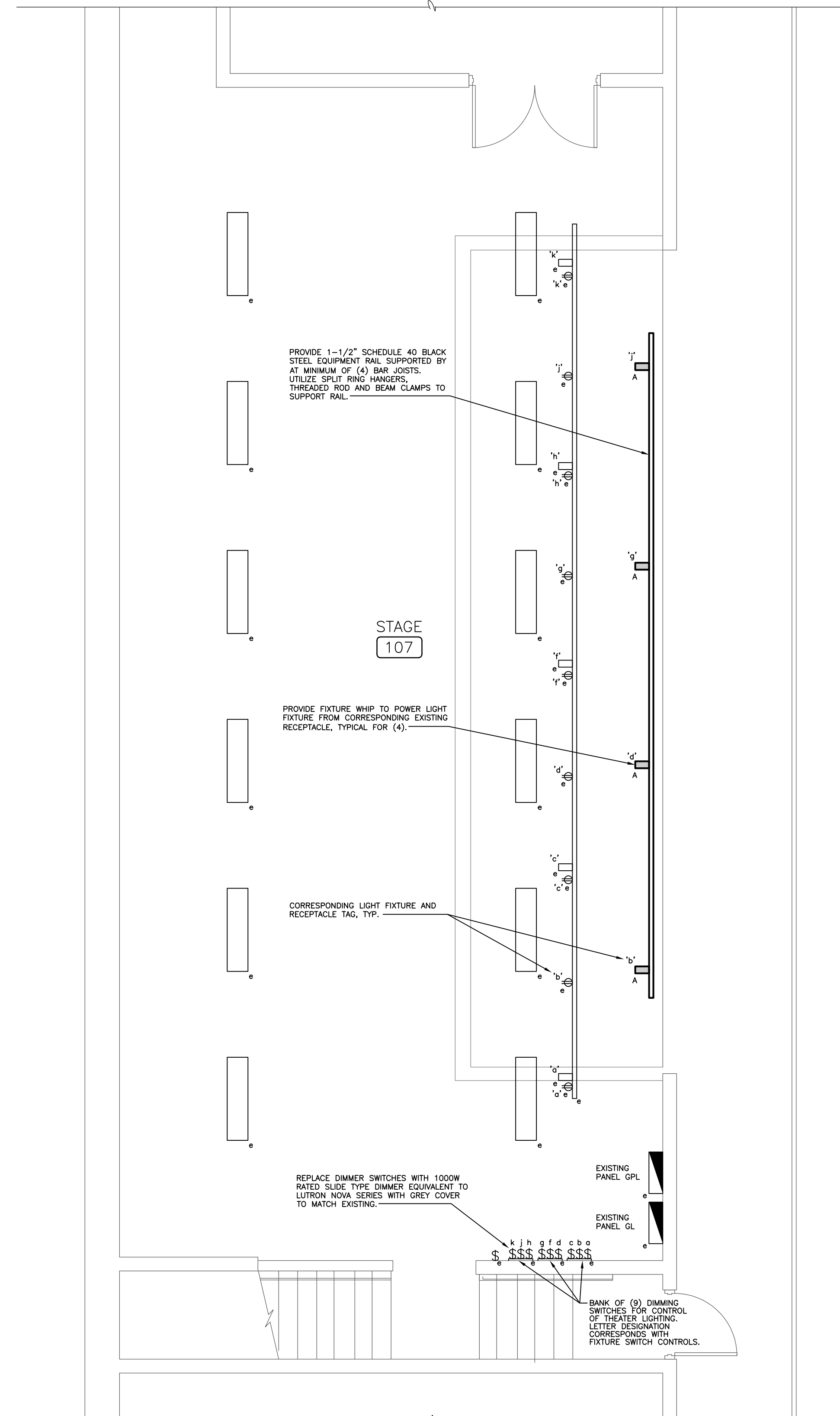
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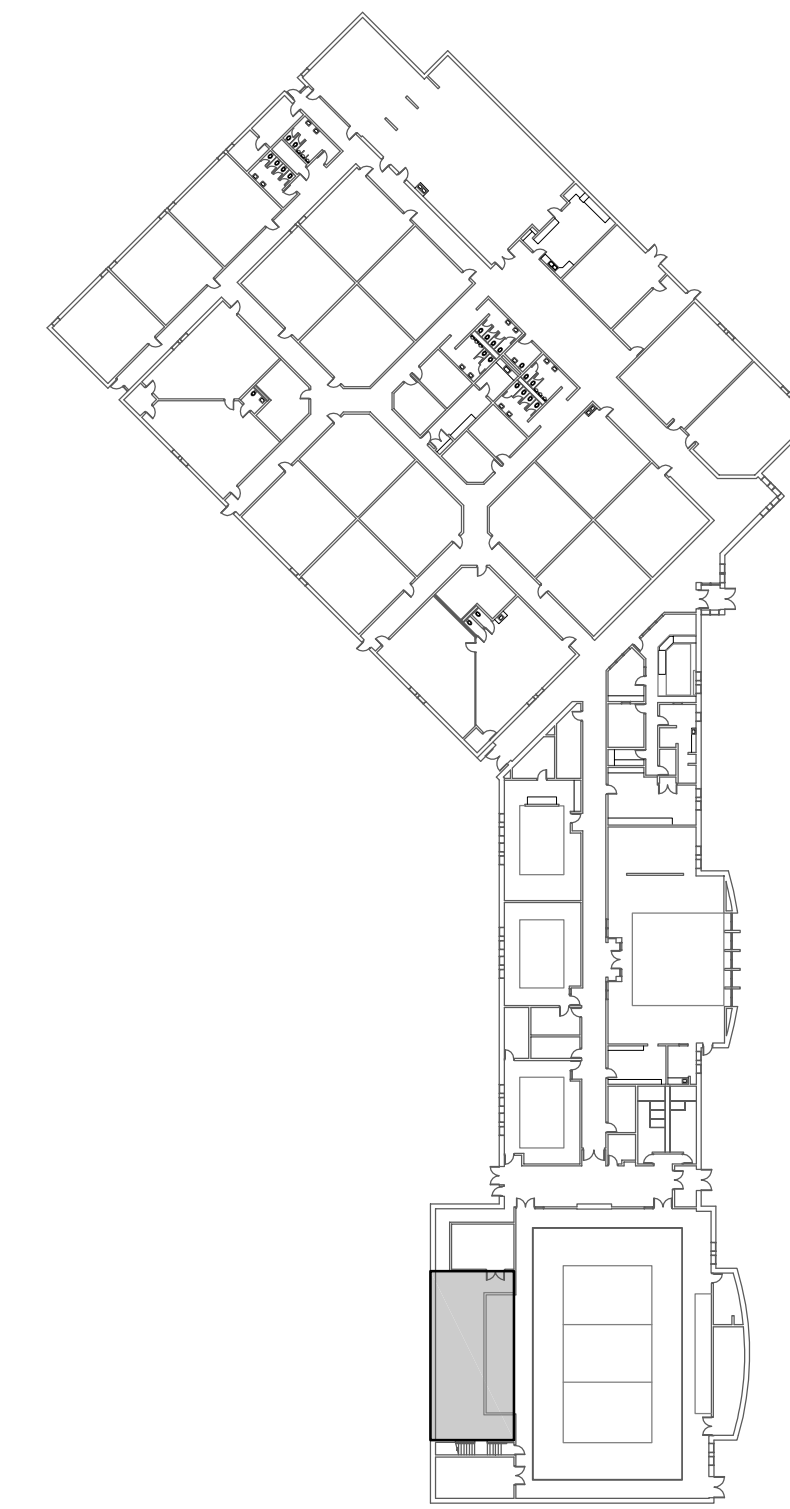
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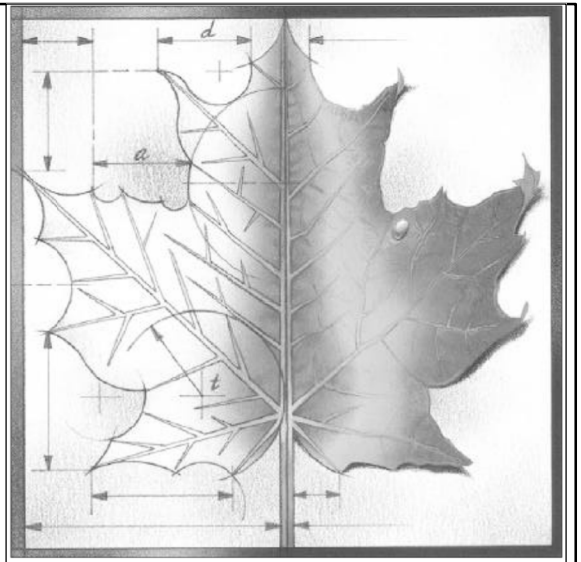
STAGE LIGHTING PLAN
1/4" = 1'-0"



KEY PLAN
NO SCALE

LIGHTING FIXTURE SCHEDULE				
MARK	SIZE	MANUF.	DESCRIPTION	LAMPS
A	10.8" L x 8.3" W x 8.3" H	ETC	Series Source Four PAR EA theatrical spot with rugged die-cast aluminum construction, high-impact and thermally insulated knobs, sealed reflector housing with tool free access to reflector and lens, integral heat sink fins, gel frame holders with two accessory slots, top-mounted gel-frame retainer, steel yoke with two mounting positions, and positive locking yoke clutch. Provide fixture with HPL 375/115X wide lens lamping at 3,050K and 1,000 hours average rated life.	375W PAR-EA HPL

NOTES:
1. ---



BBN

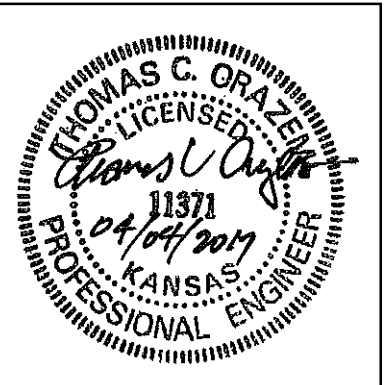
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△ Addendum 1 - 4-6-17

REVISIONS:

△ 4-6-17



Project Number:

Date: 04/04/2017

Project Name:

**USD 320 WAMEGO WEST
ELEMENTARY
IMPROVEMENTS**

Project Address:

1911 Sixth Street
Wamego, KS 66547

Sheet Title:

**Stage Lighting
Improvements**

Sheet:

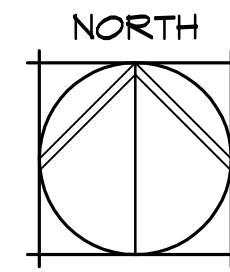
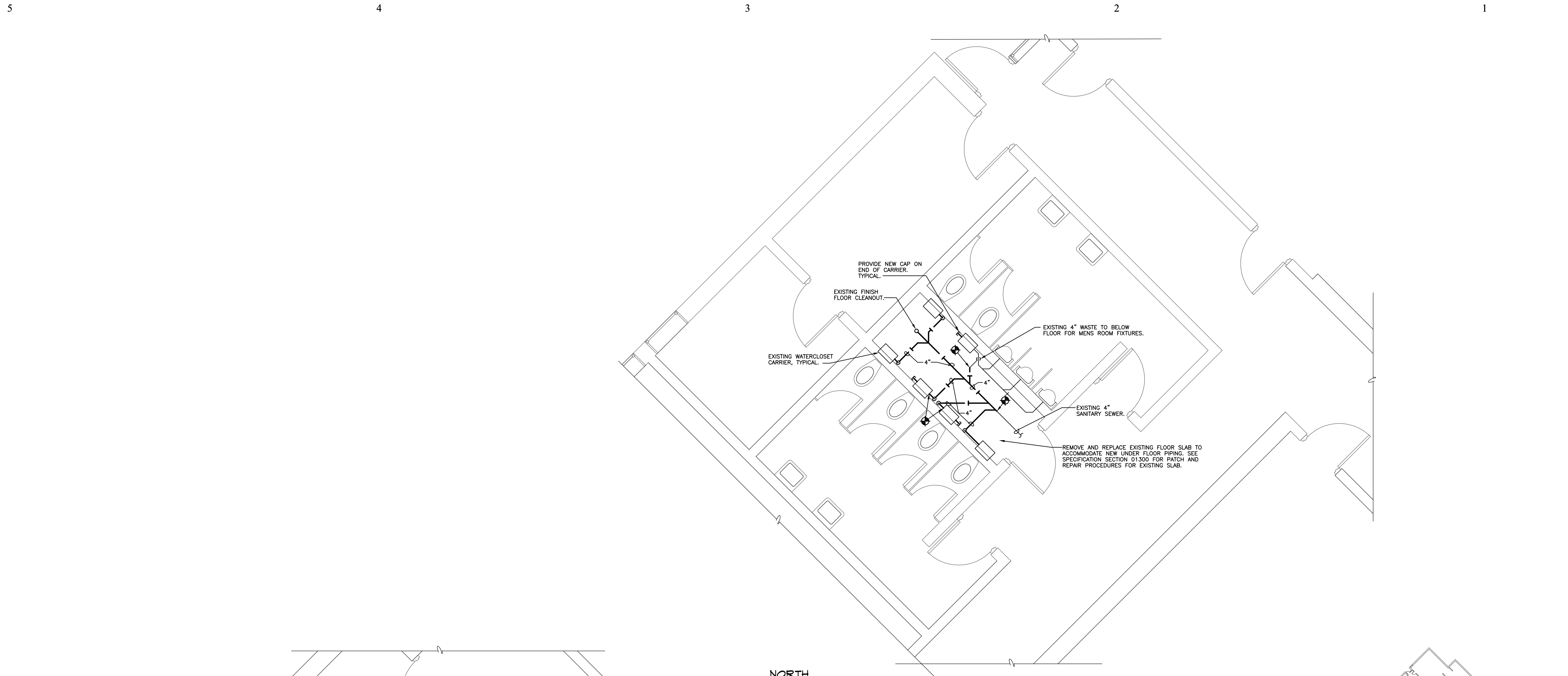
E101

OF:

2

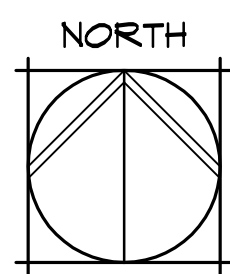
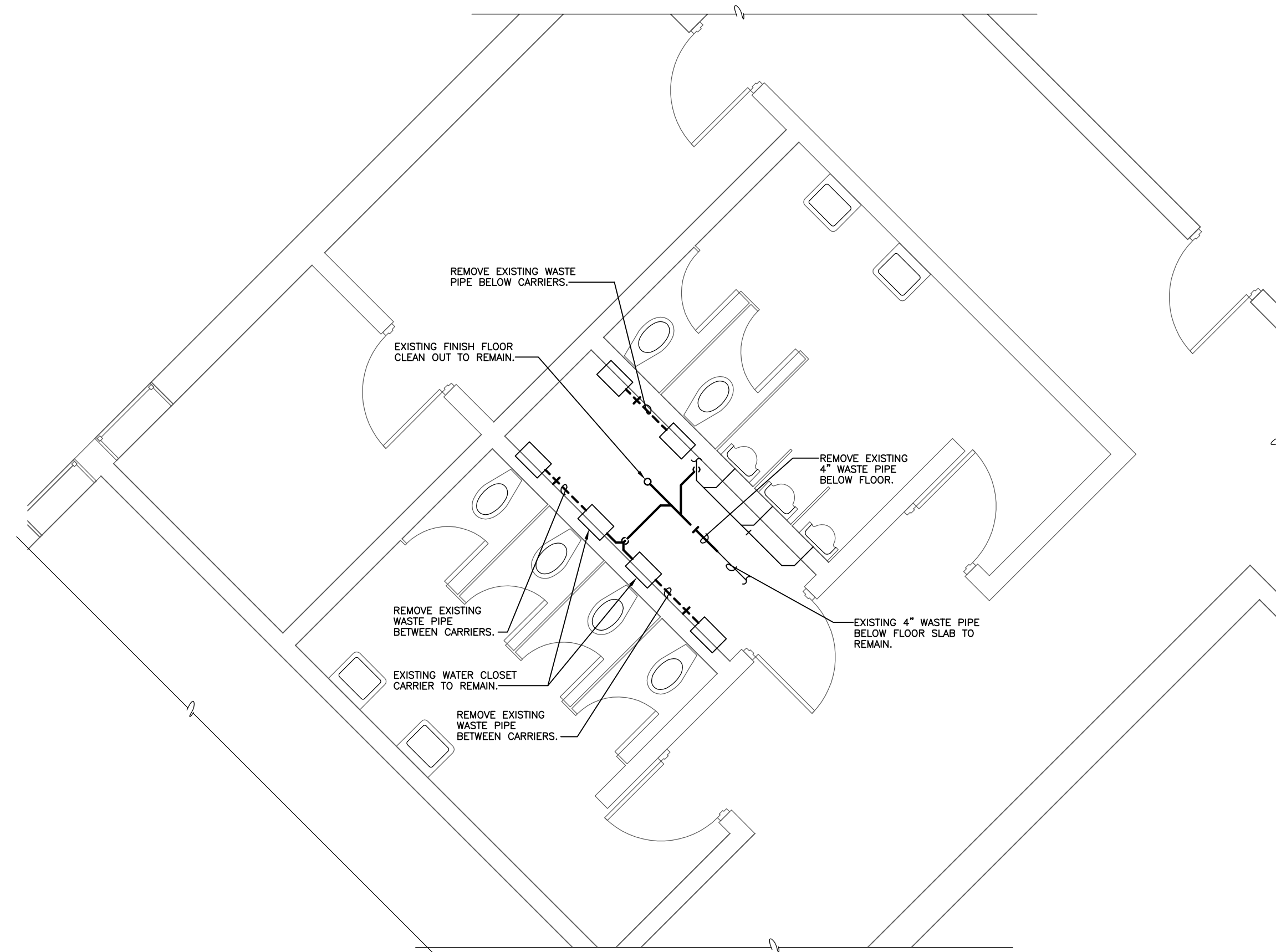
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Job No. 15011-1



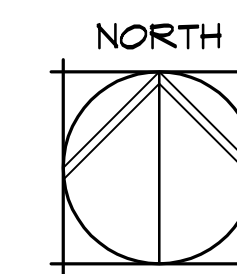
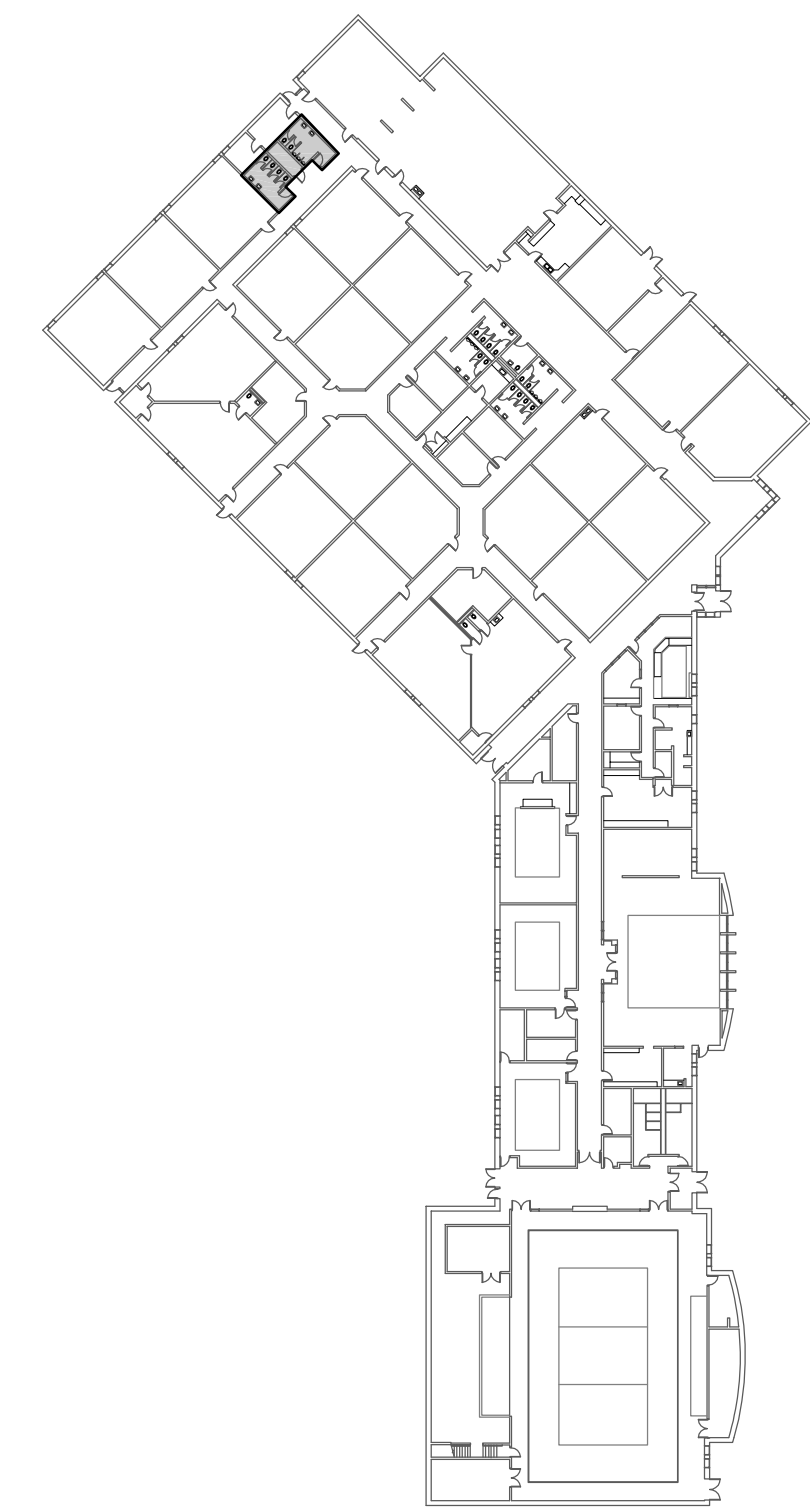
PARTIAL PLAN - PLUMBING IMPROVEMENTS

1/4" = 1'-0"



PARTIAL PLAN - PLUMBING DEMOLITION

1/4" = 1'-0"

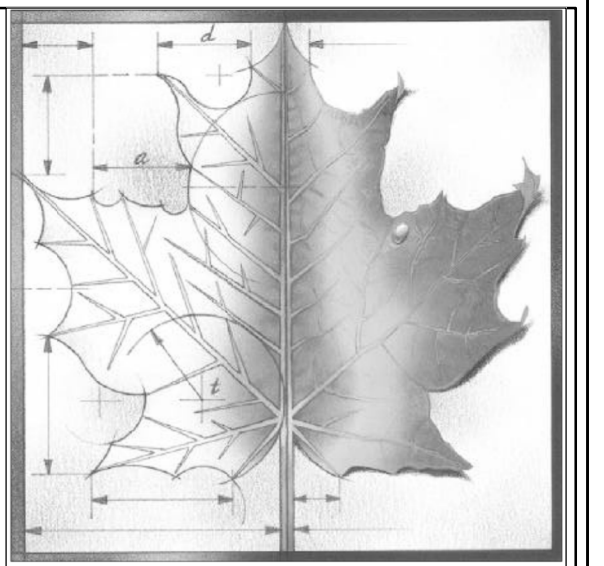


KEY PLAN

NO SCALE

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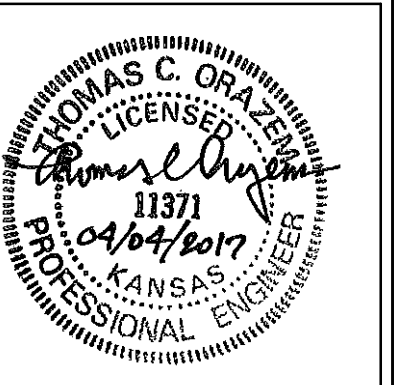
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Date: 04/04/2017

Project Name:

**USD 320 WAMEGO WEST
 ELEMENTARY
 IMPROVEMENTS**

Project Address:

1911 Sixth Street
 Wamego, KS 66547

Sheet Title:

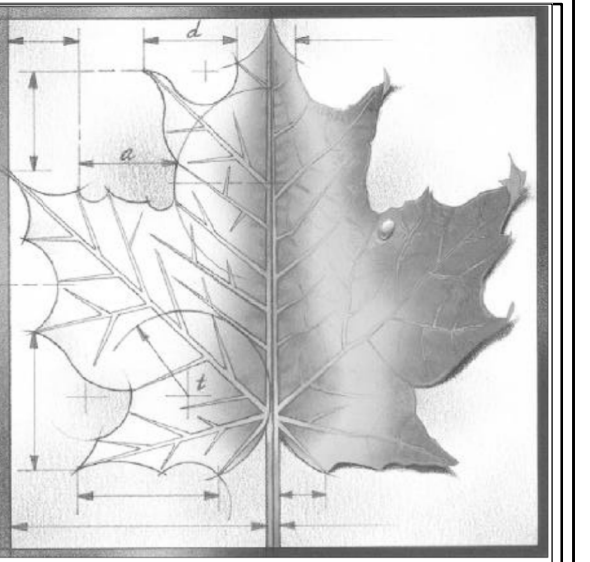
**PLUMBING
 IMPROVEMENTS**

Sheet:

P101

Of:

2



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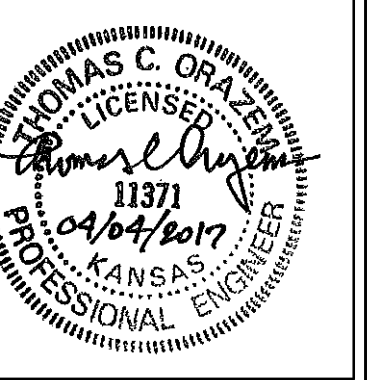
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Project Number:

Date: 04/04/2017

Project Name:

**USD 320 WAMEGO
MIDDLE SCHOOL
IMPROVEMENTS**

Project Address:

1701 Kaw Valley Road
Wamego, KS 66547

Sheet Title:

**MECHANICAL
IMPROVEMENTS
AREA B**

Sheet:

M102

Of:

12

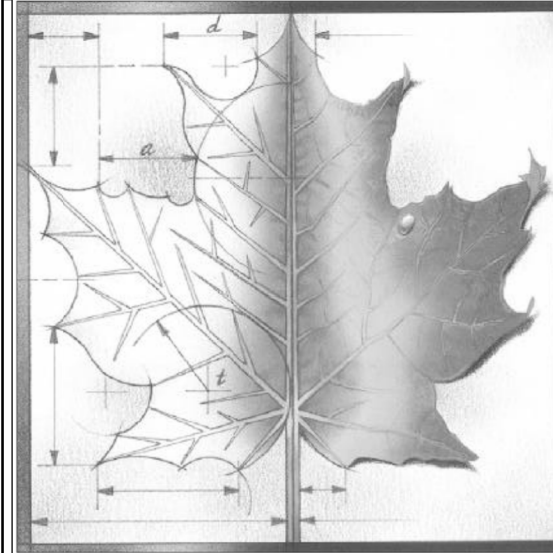
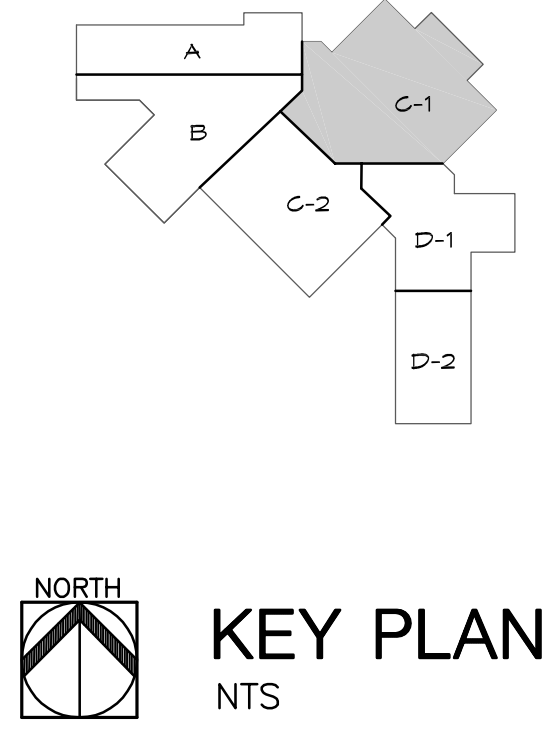
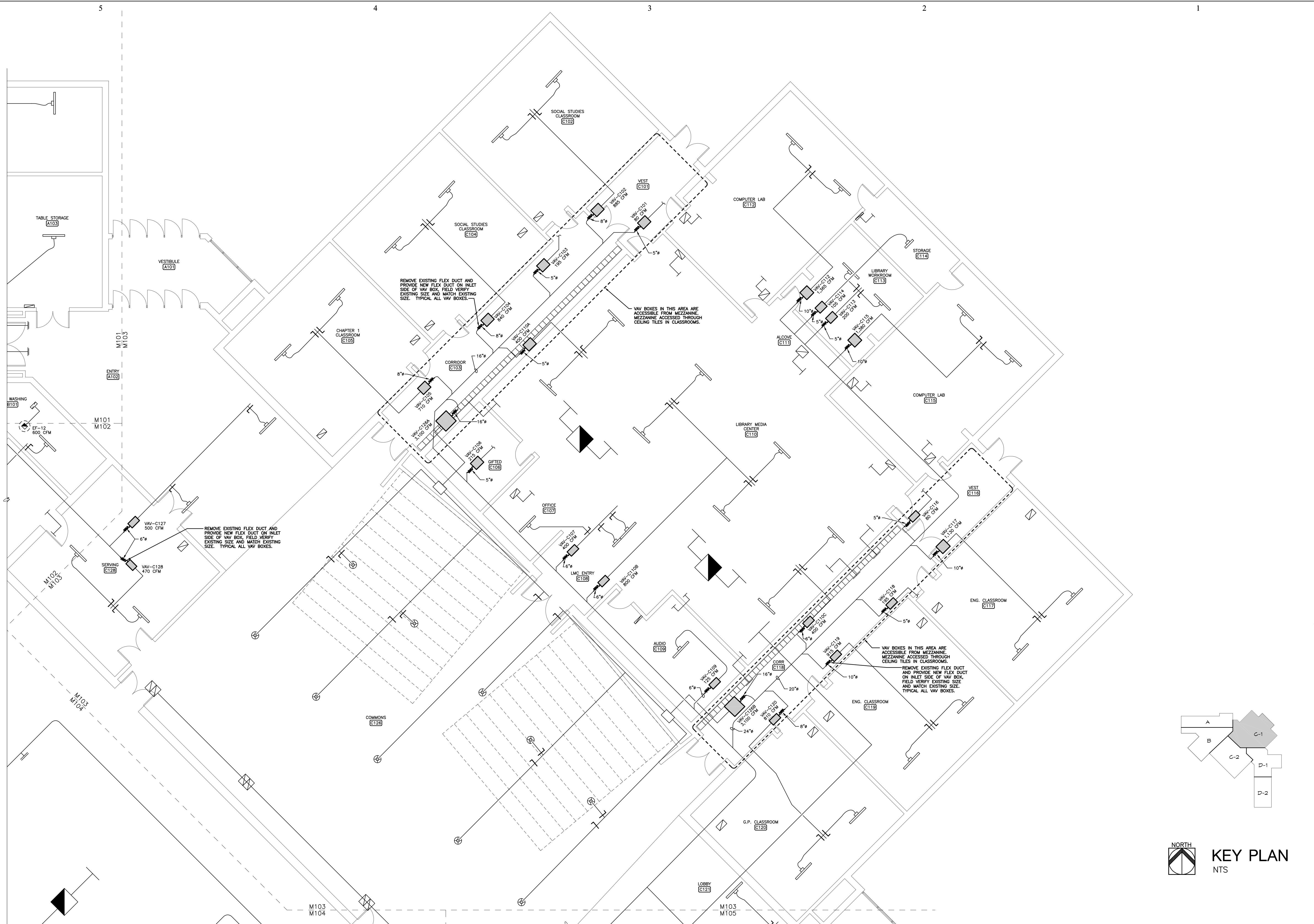


MECHANICAL IMPROVEMENTS - AREA B
1/8" = 1'-0"



KEY PLAN
NTS

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△ Addendum 1 - 4-6-17

REVISIONS:	DESCRIPTION
△ 4-6-17	
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Project Number:

Date: 04/04/2017

Project Name:
USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS

Project Address:
1701 Kaw Valley Road
Wamego, KS 66547

Sheet Title:
MECHANICAL IMPROVEMENTS AREA C1

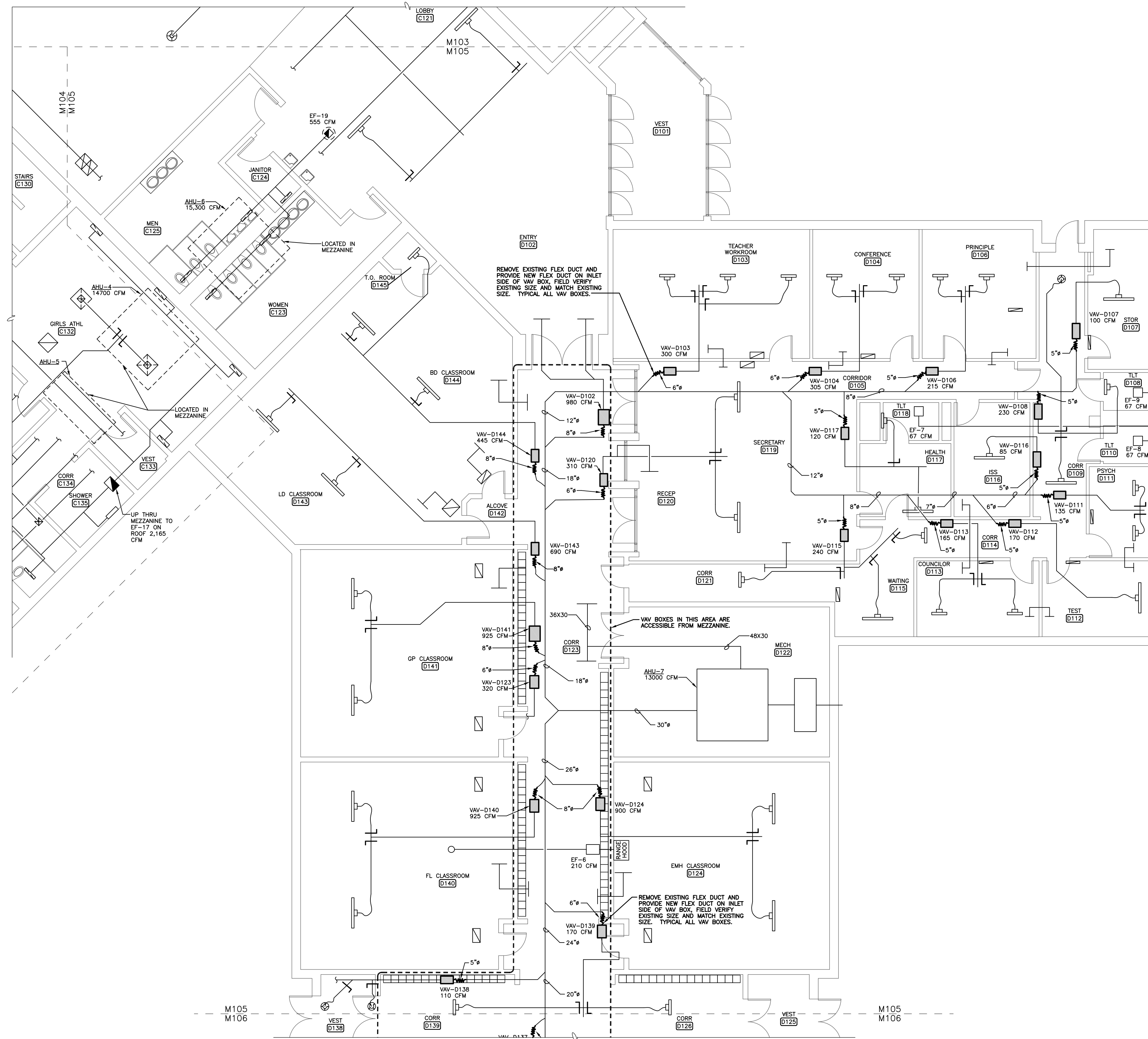
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OF: 12

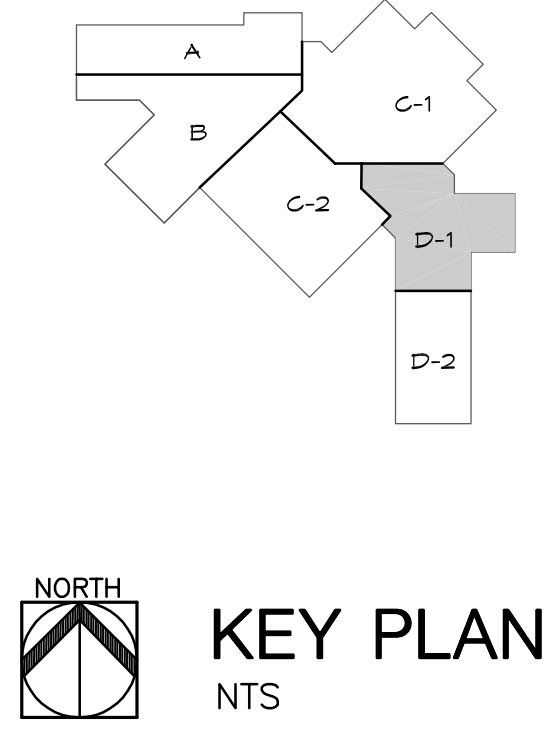


MECHANICAL IMPROVEMENTS - AREA C1
1/8" = 1'-0"

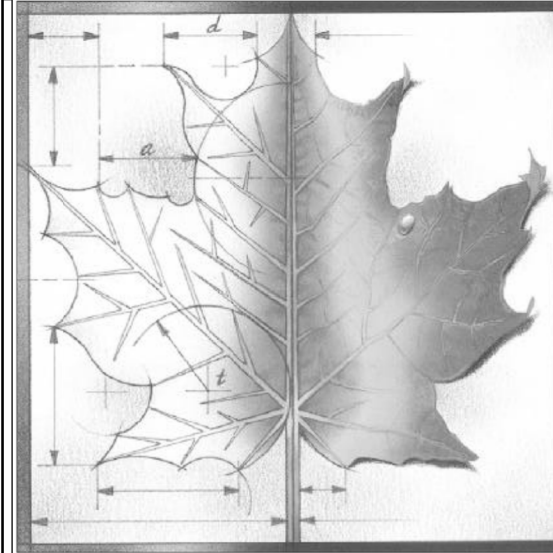
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MECHANICAL IMPROVEMENTS - AREA D1
 1/8" = 1'-0"



KEY PLAN
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Date: **04/04/2017**

Project Name:

USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS

Project Address:

**1701 Kaw Valley Road
 Wamego, KS 66547**

Sheet Title:

MECHANICAL IMPROVEMENTS AREA D1

Sheet:

M105

OF: **12**

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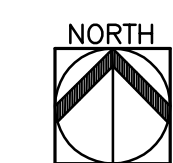
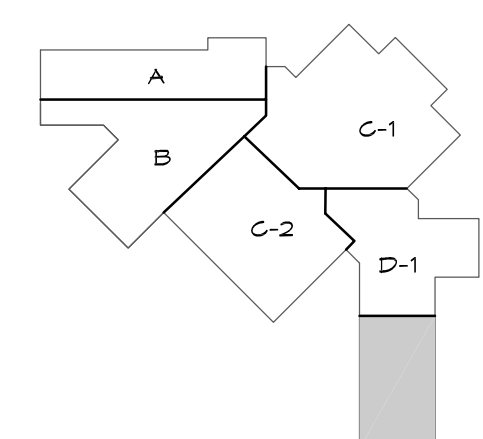
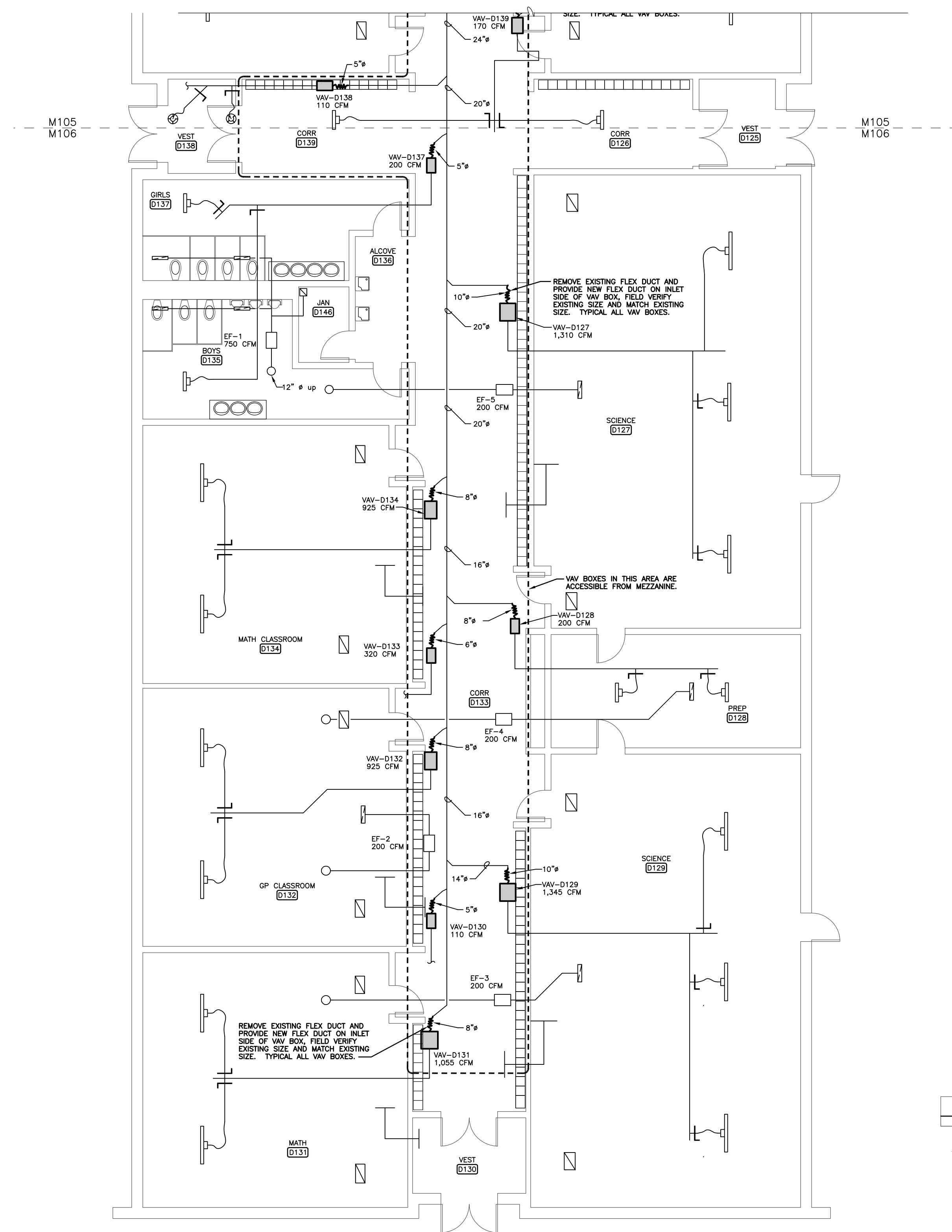
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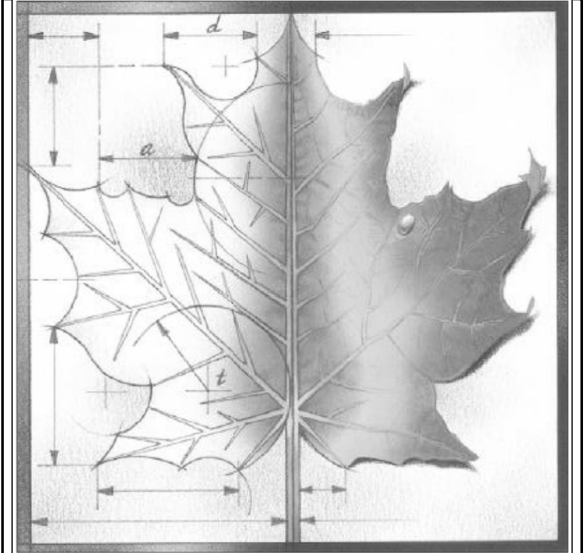


MECHANICAL IMPROVEMENTS - AREA D2
1/8" = 1'-0"



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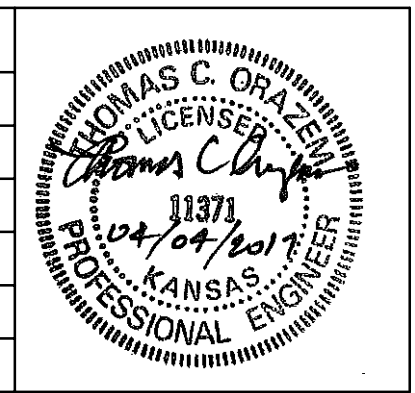
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Project Number:

Date: 04/04/2017

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USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS

Project Address:
1701 Kaw Valley Road
Wamego, KS 66547

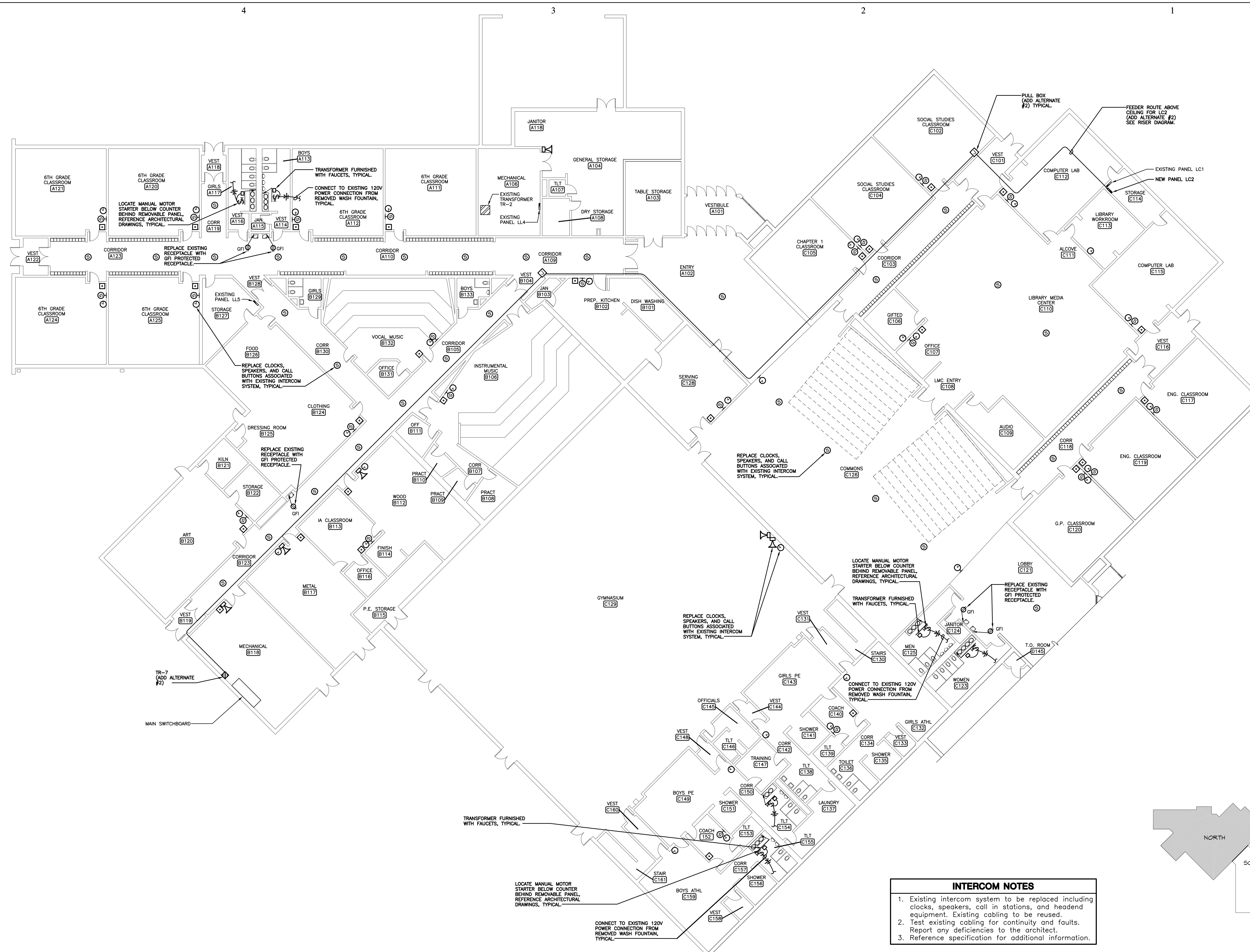
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MECHANICAL IMPROVEMENTS AREA D2

Sheet:

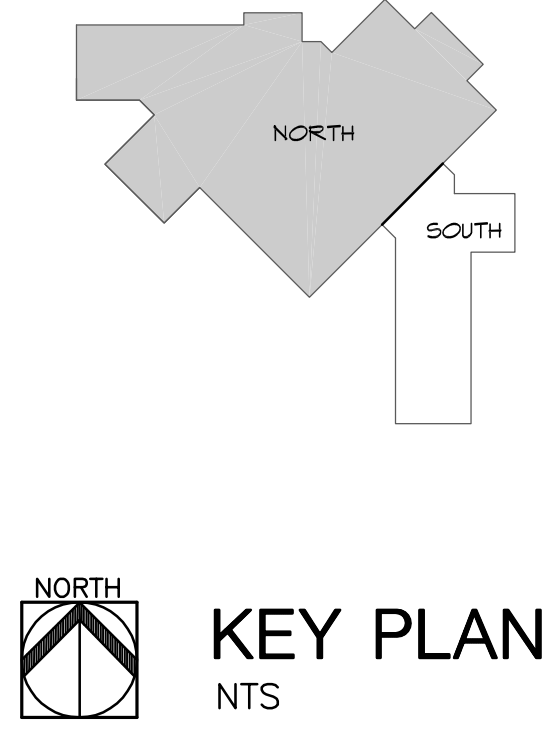
M106

OF: 12



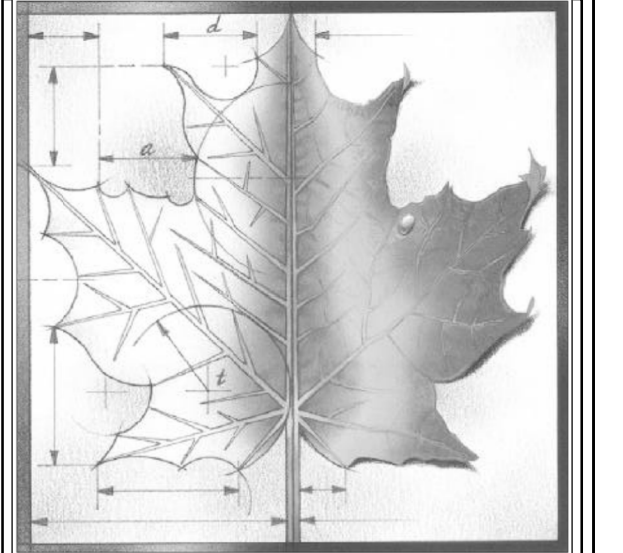
INTERCOM NOTES

- Existing intercom system to be replaced including clocks, speakers, call in stations, and headend equipment. Existing cabling to be reused.
- Test existing cabling for continuity and faults. Report any deficiencies to the architect.
- Reference specification for additional information.



ELECTRICAL PLAN - NORTH
1/16" = 1'-0"

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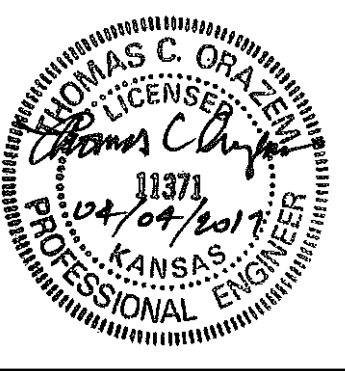
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REVISIONS:	DATE	DESCRIPTION
▲	4-6-17	
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Project Number:
Date: **04/04/2017**
Project Name:
USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS
Project Address:
**1701 Kaw Valley Road
Wamego, KS 66547**

Sheet Title:
ELECTRICAL PLAN

Sheet:
E101
OF: **12**

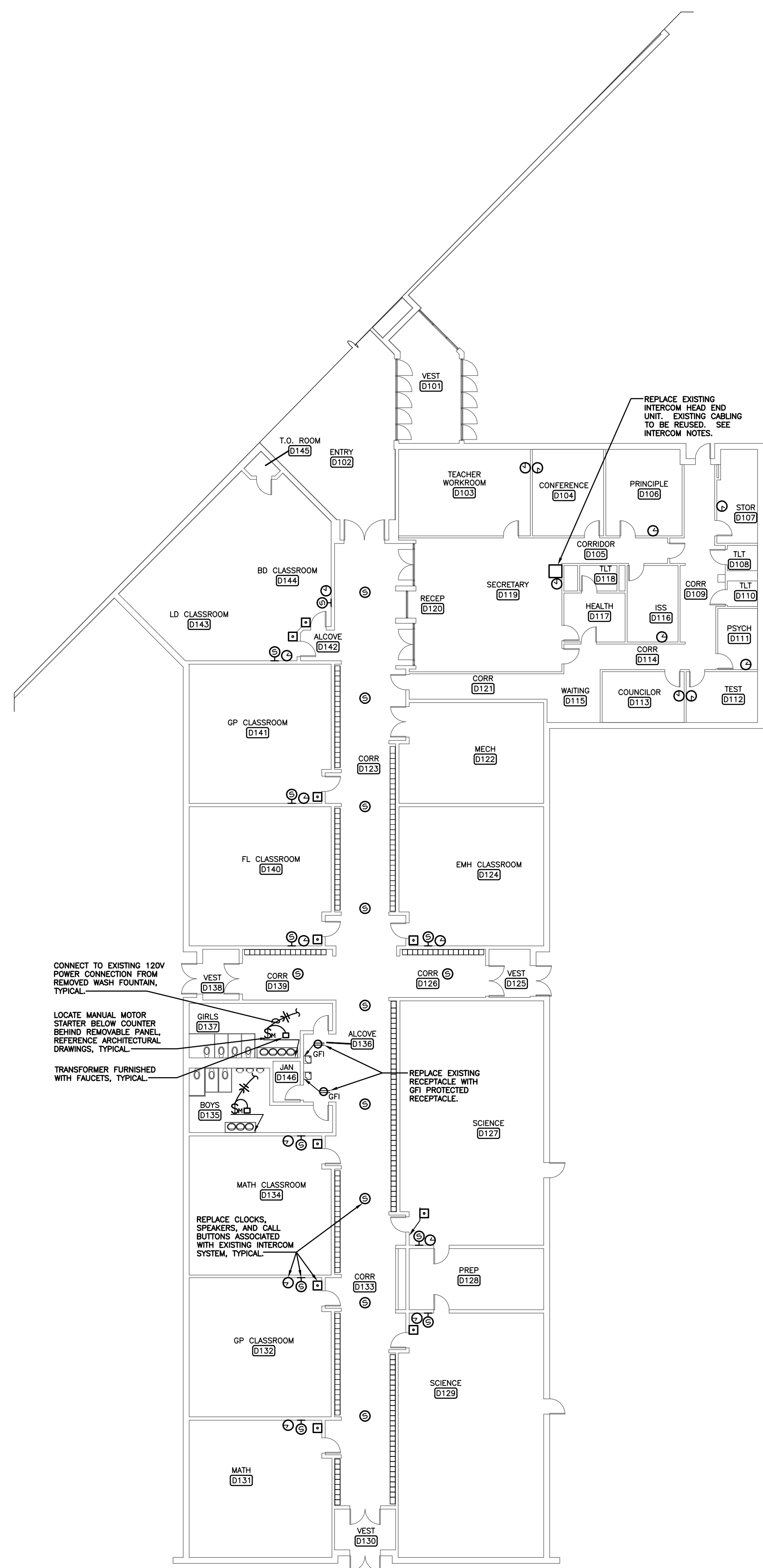
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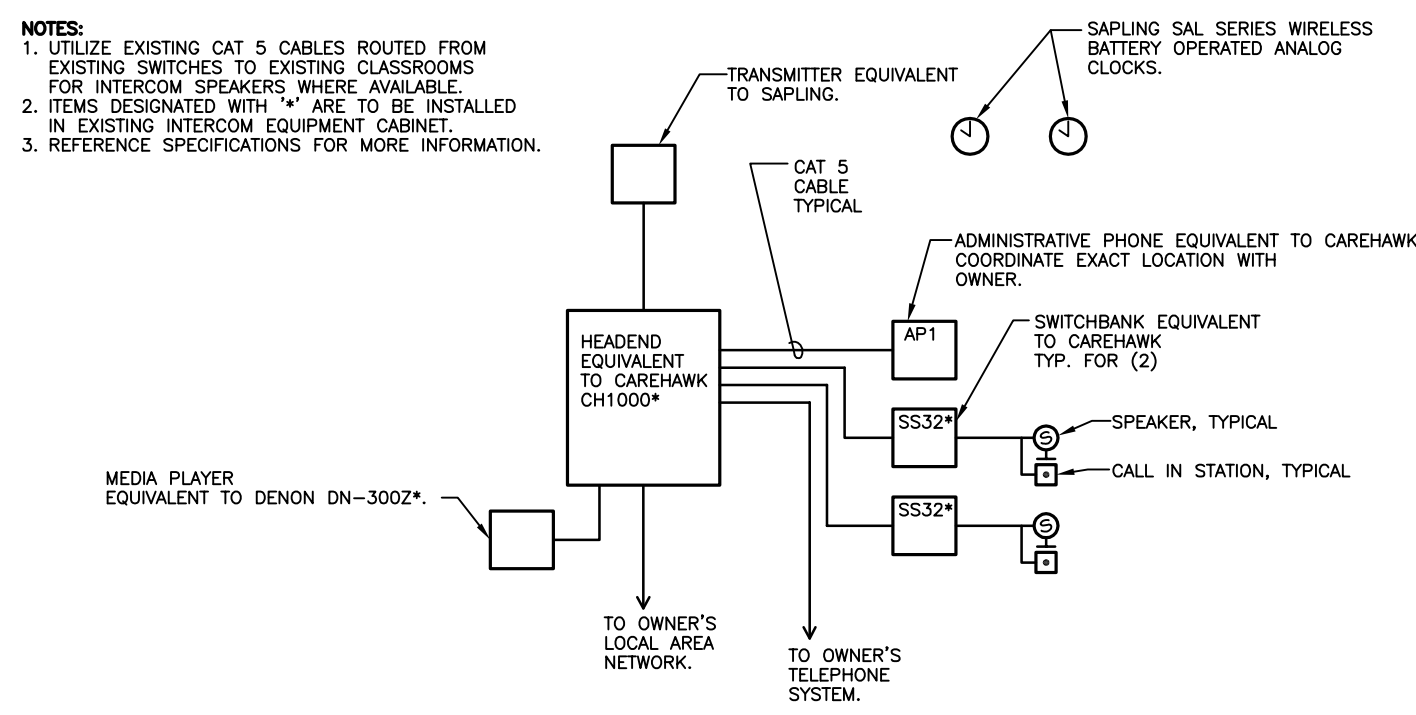
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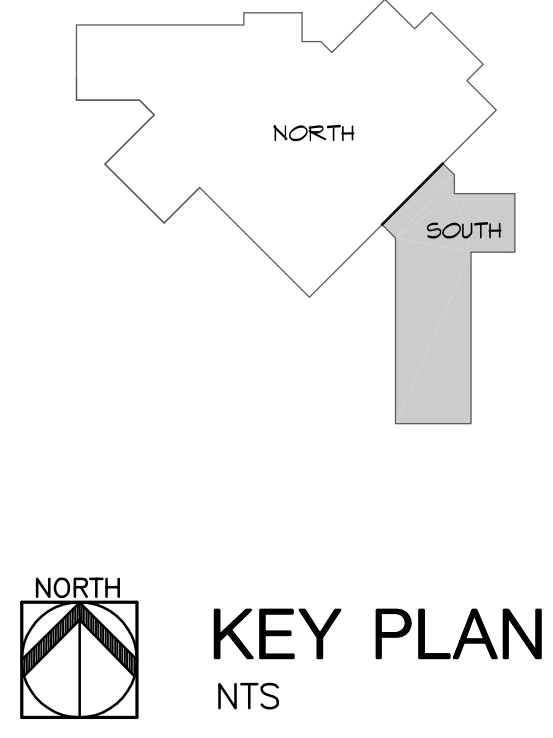


ELECTRICAL PLAN - SOUTH
1/16" = 1'-0"

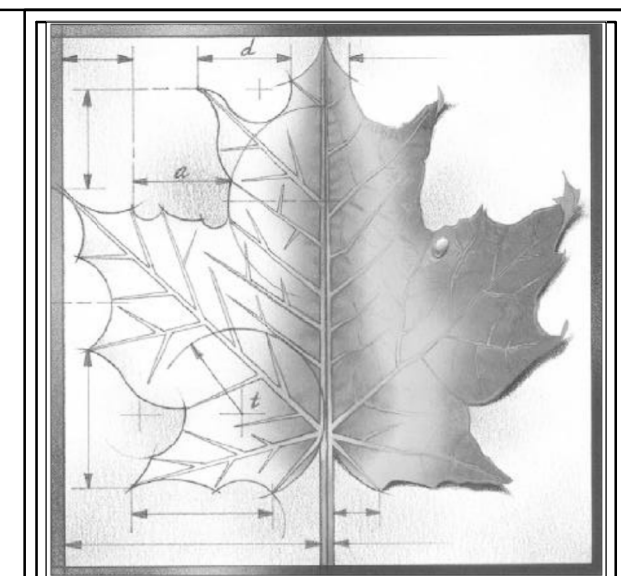


A INTERCOM RISER DIAGRAM
NOT TO SCALE

- INTERCOM NOTES**
- Existing intercom system to be replaced including clocks, speakers, call in stations, and headend equipment. Existing cabling to be reused.
 - Test existing cabling for continuity and faults. Report any deficiencies to the architect.
 - Reference specification for additional information.



KEY PLAN
NTS



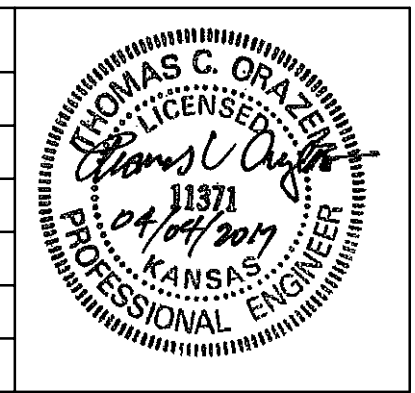
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USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS

Project Address:

**1701 Kaw Valley Road
Wamego, KS 66547**

Sheet Title:

ELECTRICAL PLAN

Sheet: **E102**

OF: **12**

Job No. 15011-1

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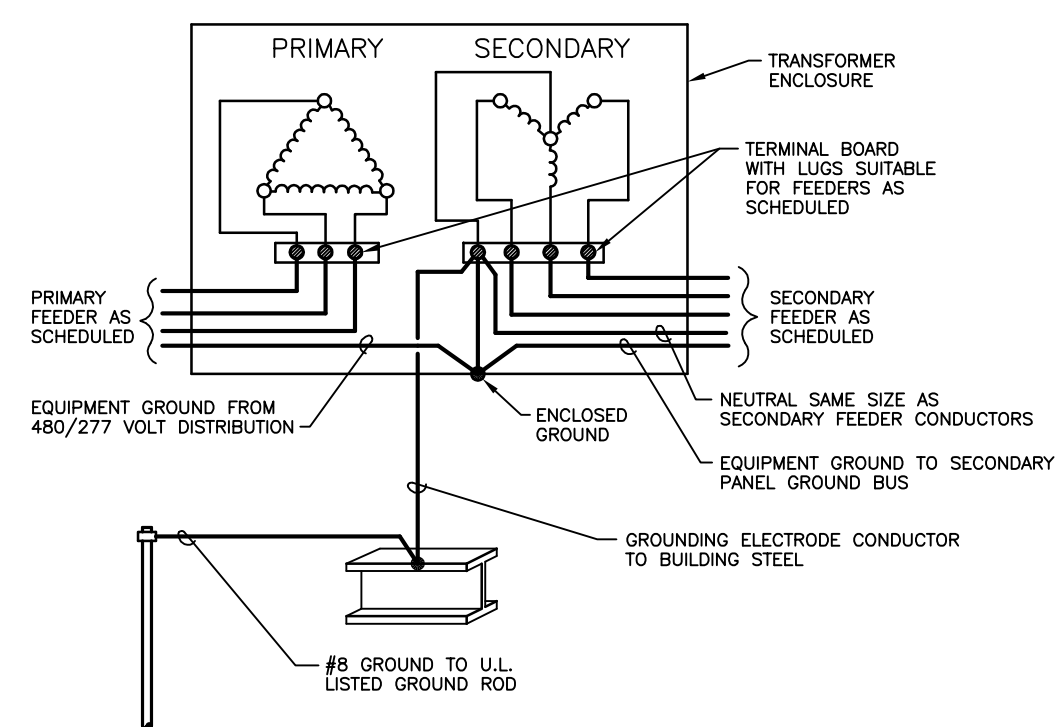
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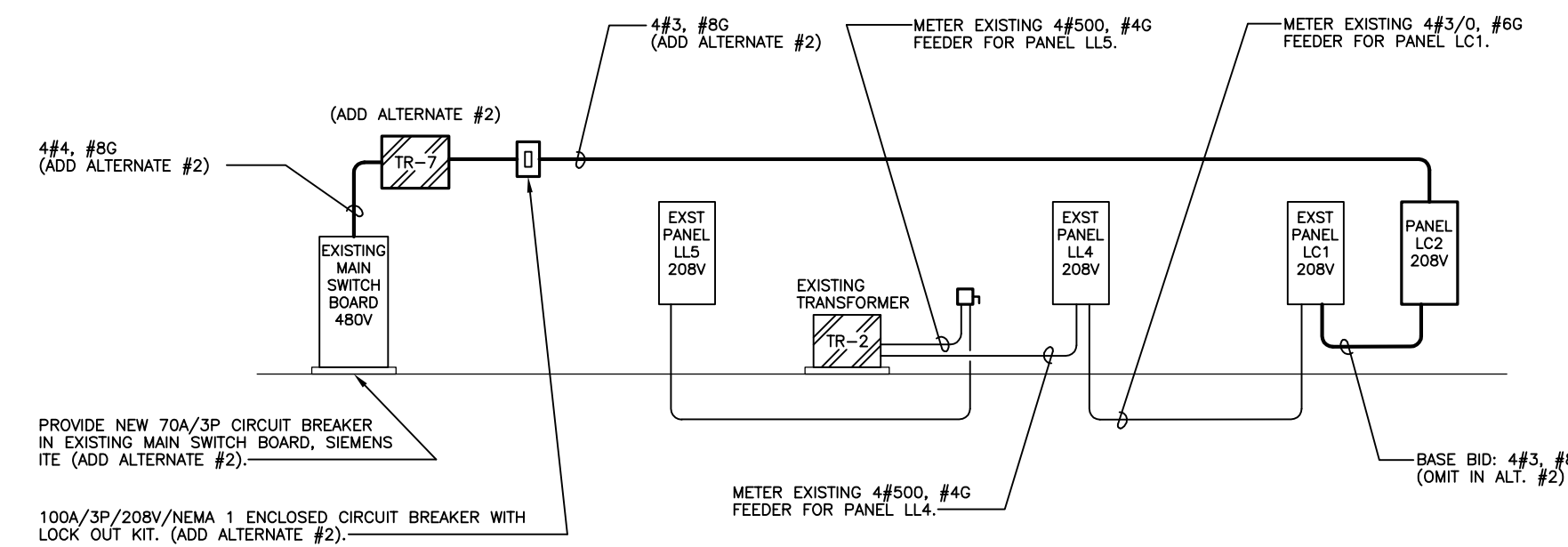
3

2

1



B TRANSFORMER DETAIL (ALT. #2)
NOT TO SCALE



A PARTIAL RISER DIAGRAM
NOT TO SCALE

ELECTRICAL EQUIPMENT SCHEDULE (ALT. #2)

TRANSFORMERS	Mark	KVA	Mounting	Secondary Conductors	GEC
TR-7	45	SUSPENDED	4#3, #8G	#8	

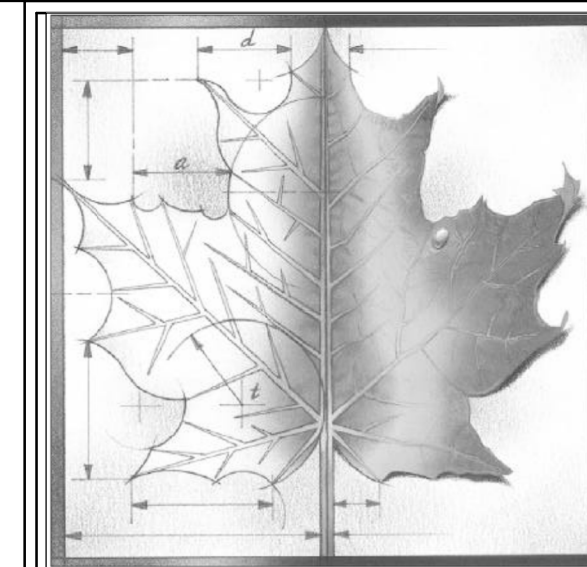
Dry type transformer for indoor installation, U.L. listed, compliant with IEEE, NEMA and ANSI standards, three phase, 60 hertz, 480 volt delta primary 208/120 volt wye secondary, (6) 2-1/2% full capacity taps, 150 degree C temperature rise, ventilated enclosure and internal vibration isolation core mounting. Provide NEC compliant signage for transformers served by remote disconnects.

EXISTING PANELBOARD SCHEDULE			
PANEL DESIGNATION: Existing Panel 'LC1'		MIN A.I.C.: 10,000	FEATURES:
LOCATION: Library		MCB Amps: MLO	- Panelboard Construction
VOLTS: 120/208		BUS Amps: 200	- Equipment Ground Bus
CONFIGURATION: 3 Phase/4 Wire		ENCL.: NEMA 1	- Existing Siemens BG42
MOUNTING: Surface			
CKT.	Description	Conductors	C/B
1	Surge Suppressor	(e)30	3
7	Floor Rcpt C112	(e)2#12, #12G	(e)20/1
9	Rcpt C112	(e)2#12, #12G	(e)20/1
11	Floor Rcpt C112	(e)2#12, #12G	(e)20/1
13	Rcpt C112	(e)2#12, #12G	(e)20/1
15	Rcpt C112	(e)2#12, #12G	(e)20/1
17	Rcpt C112	(e)2#12, #12G	(e)20/1
19	Floor Rcpt C112	(e)2#12, #12G	(e)20/1
21	Floor Rcpt C112	(e)2#12, #12G	(e)20/1
23	Floor Rcpt C112	(e)2#12, #12G	(e)20/1
25	Rcpt C114	(e)2#12, #12G	(e)20/1
27	Floor Rcpt C110	(e)2#12, #12G	(e)20/1
29	Floor Rcpt C110	(e)2#12, #12G	(e)20/1
31	Rcpt C110	(e)2#12, #12G	(e)20/1
33	Floor Rcpt C107	(e)2#12, #12G	(e)20/1
35	Floor Rcpt C110	(e)2#12, #12G	(e)20/1
37	Panel LC2	4#3, #8G	100*
41			3

* Indicates new breaker in existing panel. Included in Base Bid (omit in Alt. #2).

NEW PANELBOARD SCHEDULE			
PANEL DESIGNATION: Panel 'LC2'		MIN A.I.C.: 10,000	FEATURES:
LOCATION: Library		MCB Amps: MLO	- Panelboard Construction
VOLTS: 120/208		BUS Amps: 100	- Equipment Ground Bus
CONFIGURATION: 3 Phase/4 Wire		ENCL.: NEMA 1	- Equal to Square D NQ
MOUNTING: Surface			
CKT.	Description	Conductors	C/B
1	WP Rcpt *	(e)2#12, #12G	20/1
3	Library Rcpt *	(e)2#12, #12G	20/1
5	Bleacher Rcpt & Control, OH Proj *	(e)2#12, #12G	20/1
7	Spare	---	20/1
9	Spare	---	20/1
11	Spare	---	20/1
13	Spare	---	20/1
15	Spare	---	20/1
17	Spare	---	20/1
19	Spare	---	20/1
21	Spare	---	20/1
23	Spare	---	20/1
25	Spare	---	20/1
27	Spare	---	20/1
29	Spare	---	20/1
31	Spare	---	20/1
33	Spare	---	20/1
35	Spare	---	20/1
37	Spare	---	20/1
39	Spare	---	20/1
41	Spare	---	20/1

* Indicates circuit relocated from Panel LC1



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Addendum 1 - 4-6-17

B

C

REVISIONS:	
4-6-17	

Project Number:

Date: 04/04/2017

Project Name:

USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS

Project Address:
1701 Kaw Valley Road
Wamego, KS 66547

Sheet Title:

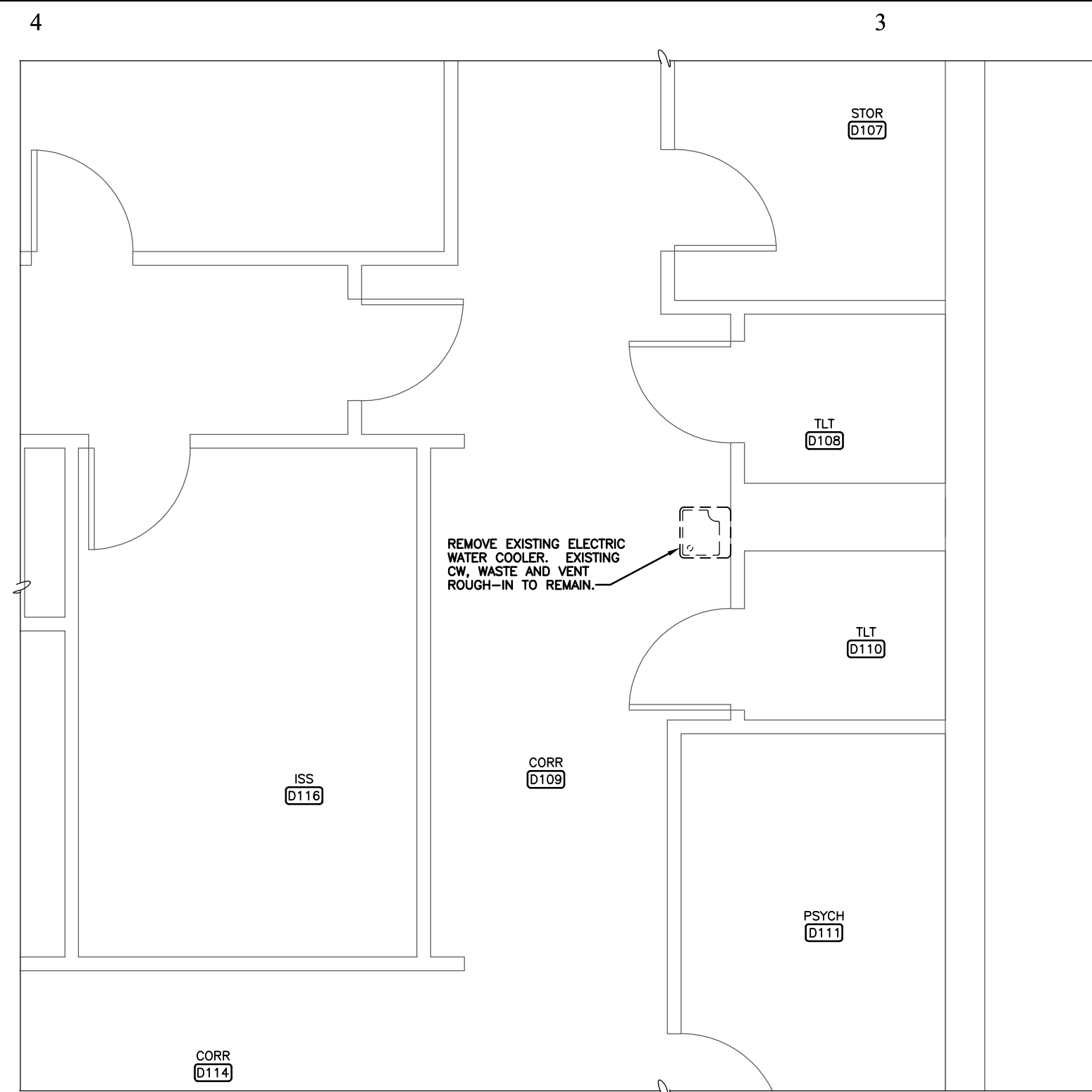
ELECTRICAL DETAILS

Sheet: E201

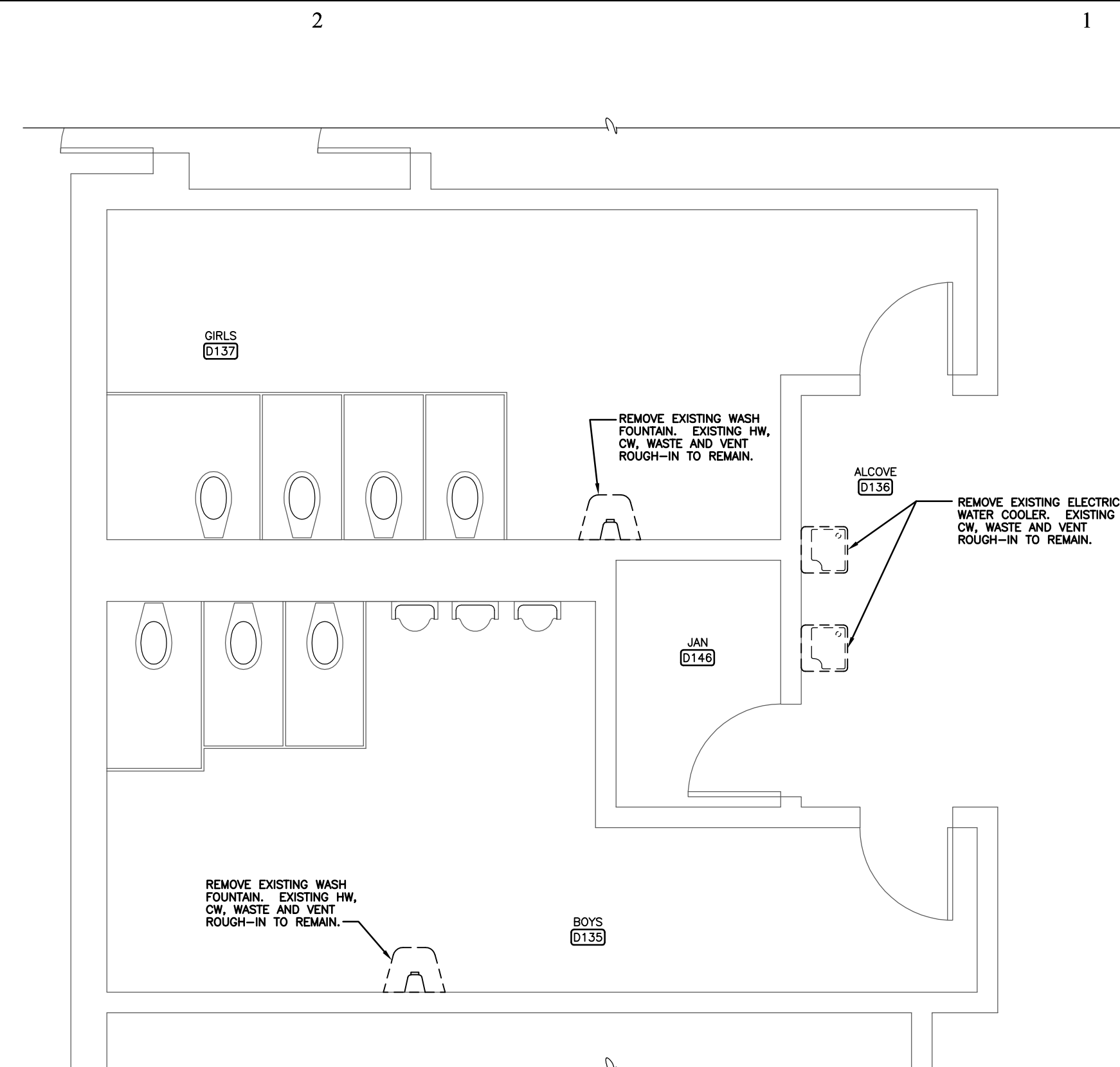
OF 12

Job No. 15011-1

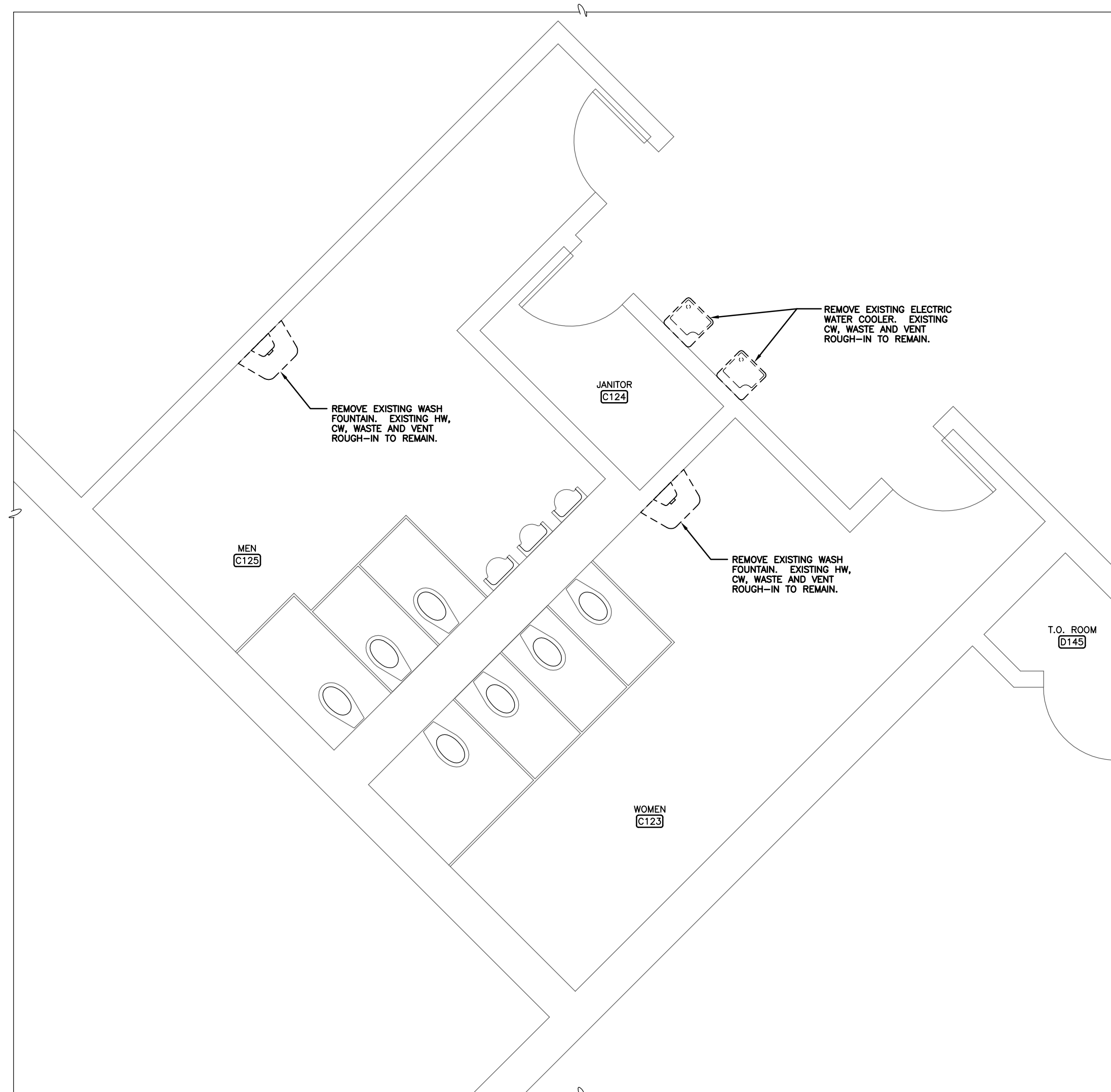
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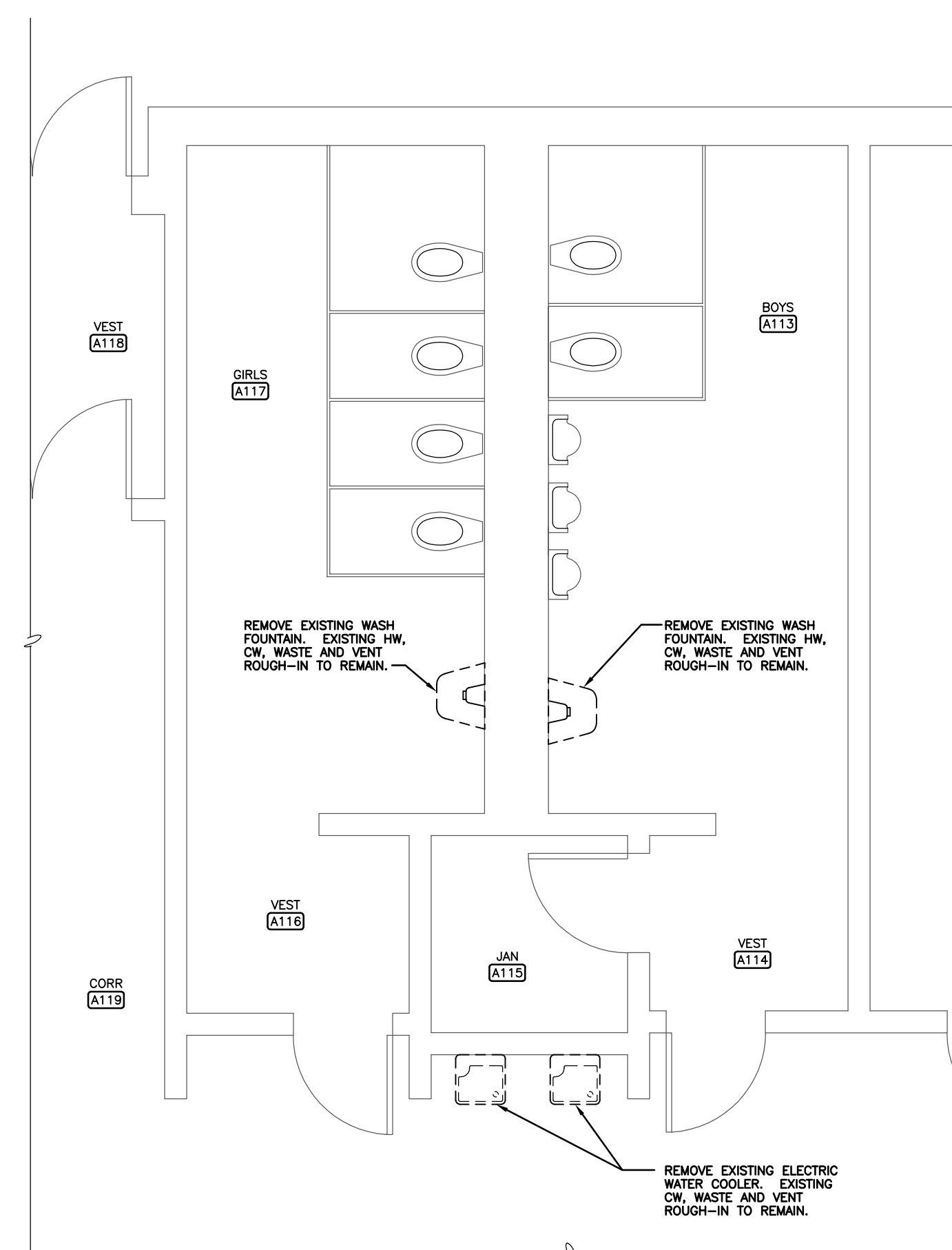
**PARTIAL PLAN -
PLUMBING DEMOLITION - AREA 4**
1/4" = 1'-0"



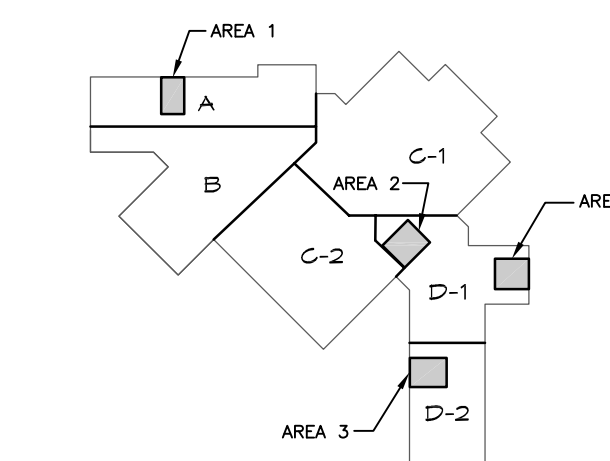
**PARTIAL PLAN -
PLUMBING DEMOLITION - AREA 3**
1/4" = 1'-0"



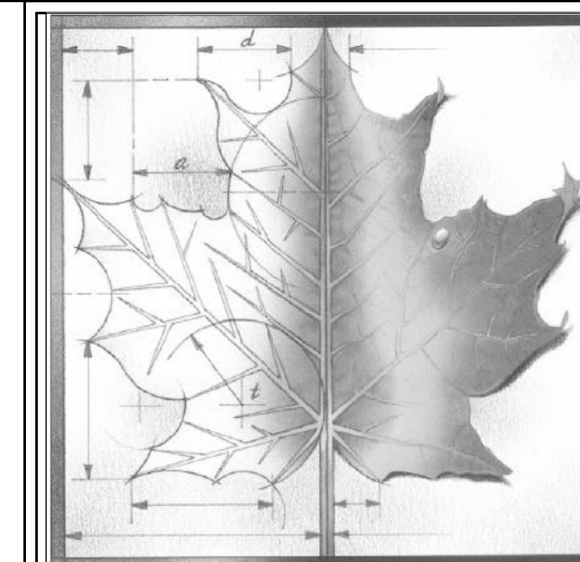
**PARTIAL PLAN -
PLUMBING DEMOLITION - AREA 2**
1/4" = 1'-0"



**PARTIAL PLAN -
PLUMBING DEMOLITION - AREA 1**
1/4" = 1'-0"



KEY PLAN
NTS



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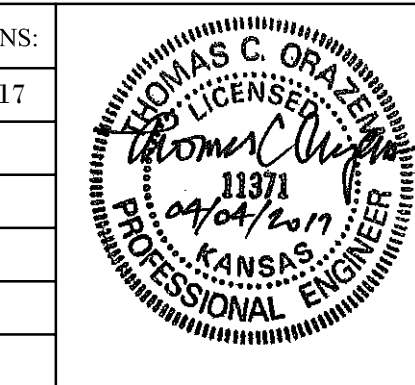
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△ 4-6-17



Project Number:

Date: 04/04/2017

Project Name:

**USD 320 WAMEGO
MIDDLE SCHOOL
IMPROVEMENTS**

Project Address:

1701 Kaw Valley Road
Wamego, KS 66547

Sheet Title:

**PLUMBING
DEMOLITION**

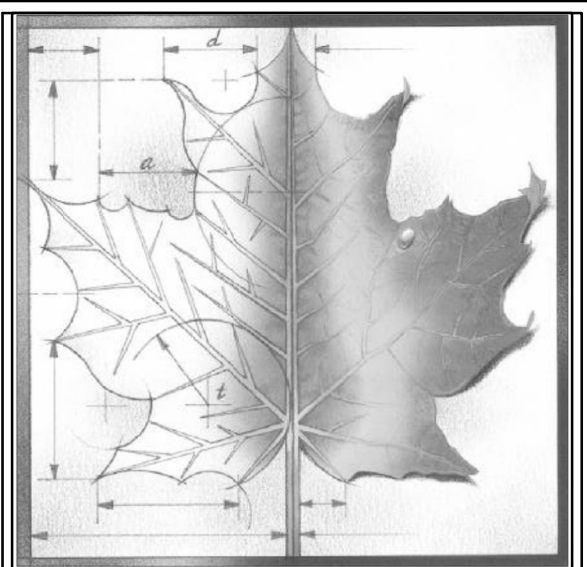
Sheet:

P101

Of:

12

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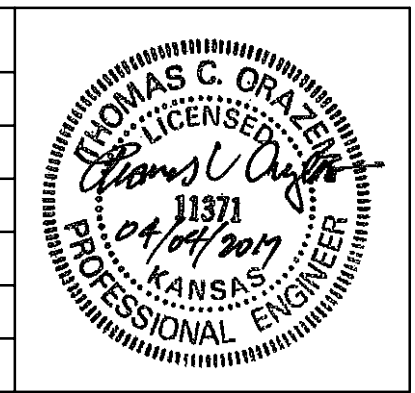
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Project Number:

Date: 04/04/2017

Project Name:

USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS

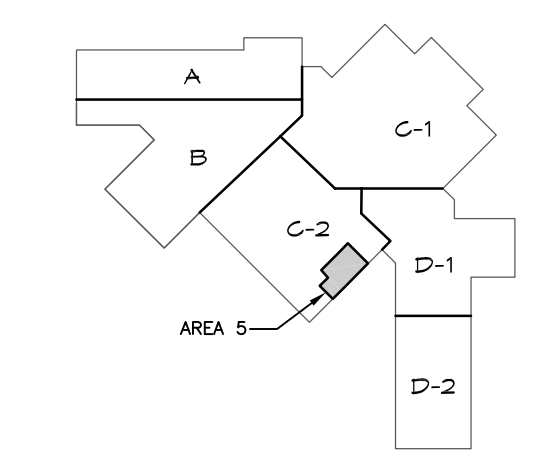
Project Address:
1701 Kaw Valley Road
Wamego, KS 66547

Sheet Title:

PLUMBING DEMOLITION

Sheet: **P102**

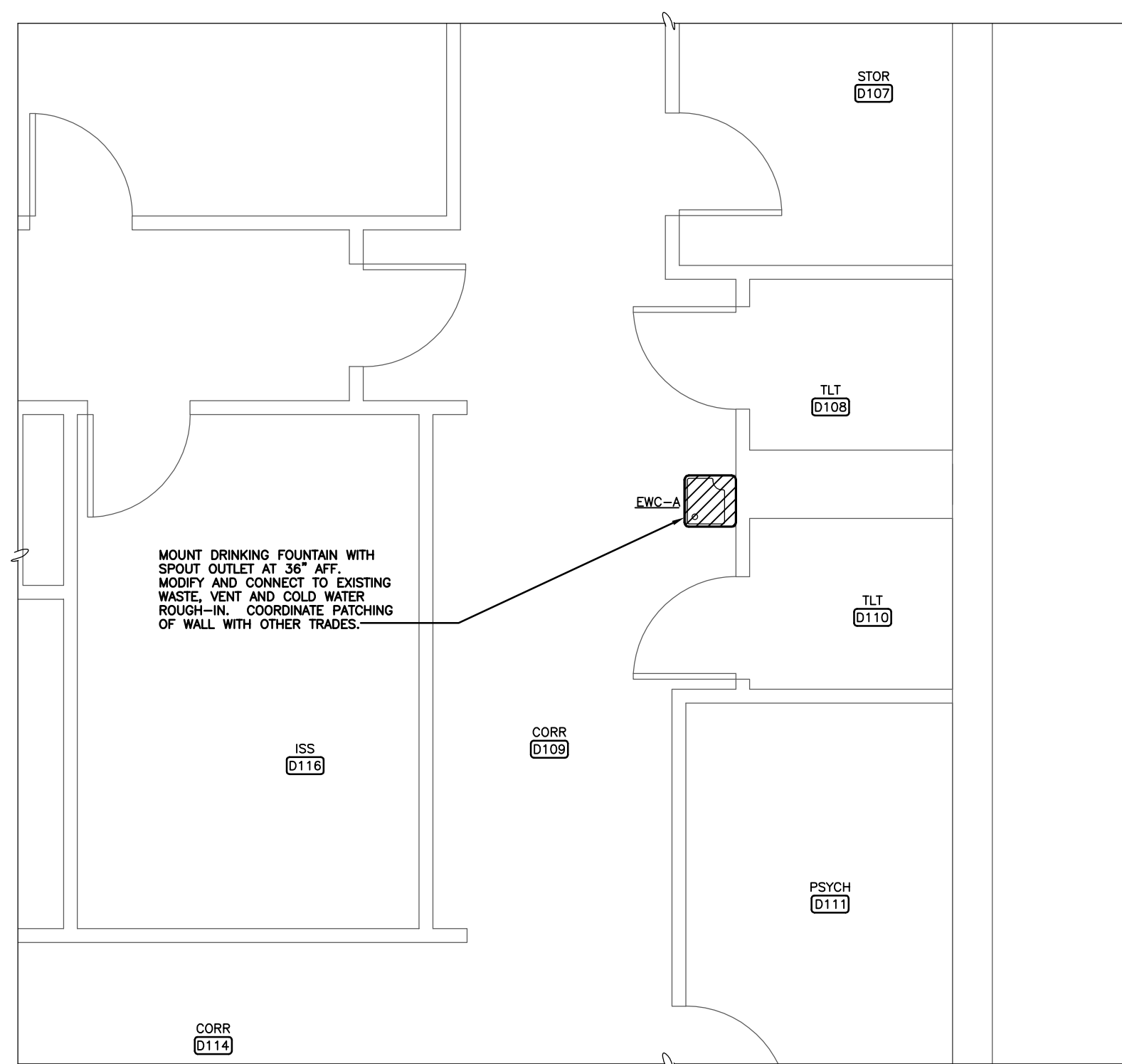
OF: 12



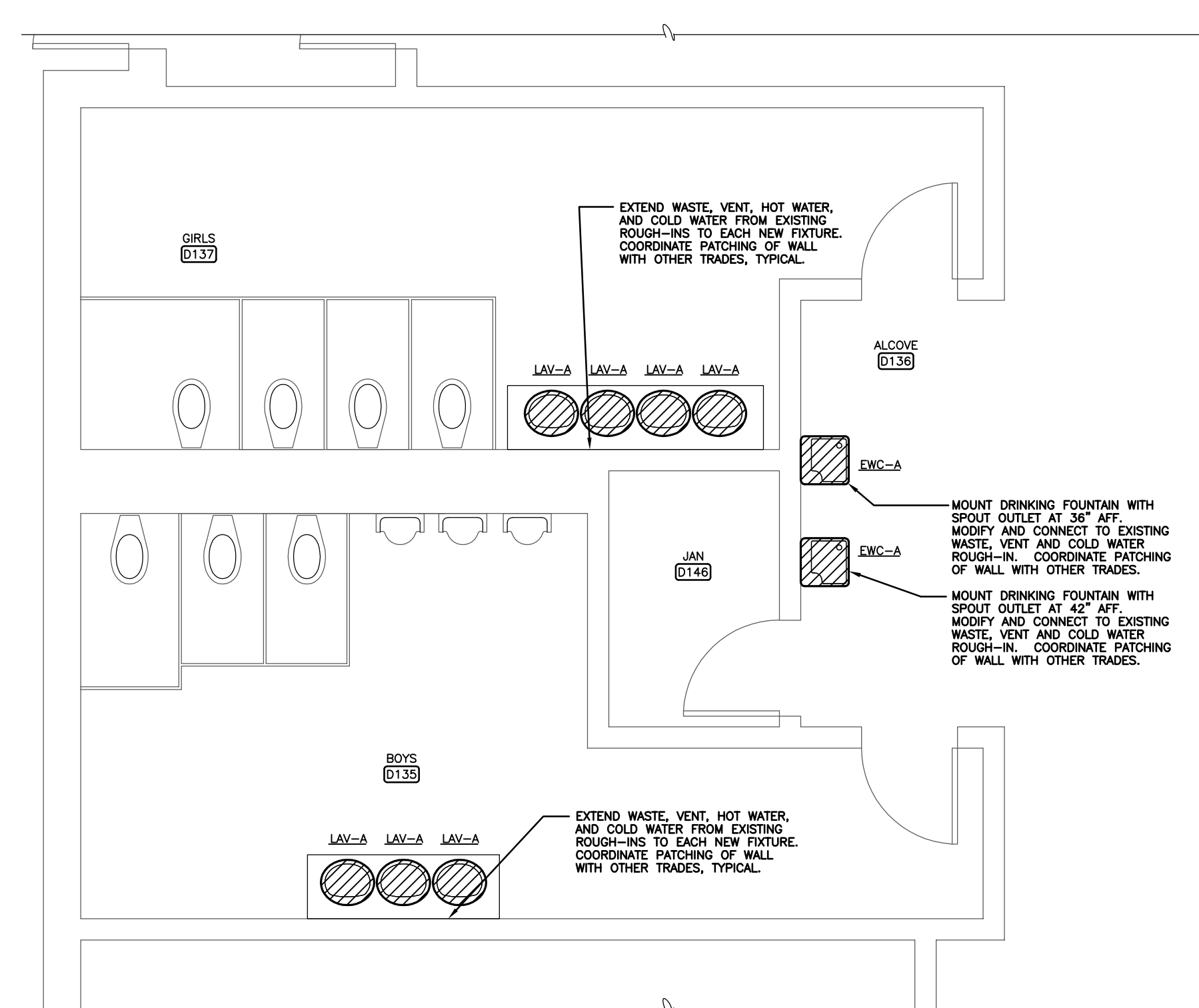
KEY PLAN
NTS

PARTIAL PLAN - PLUMBING DEMOLITION - AREA 5
1/4" = 1'-0"

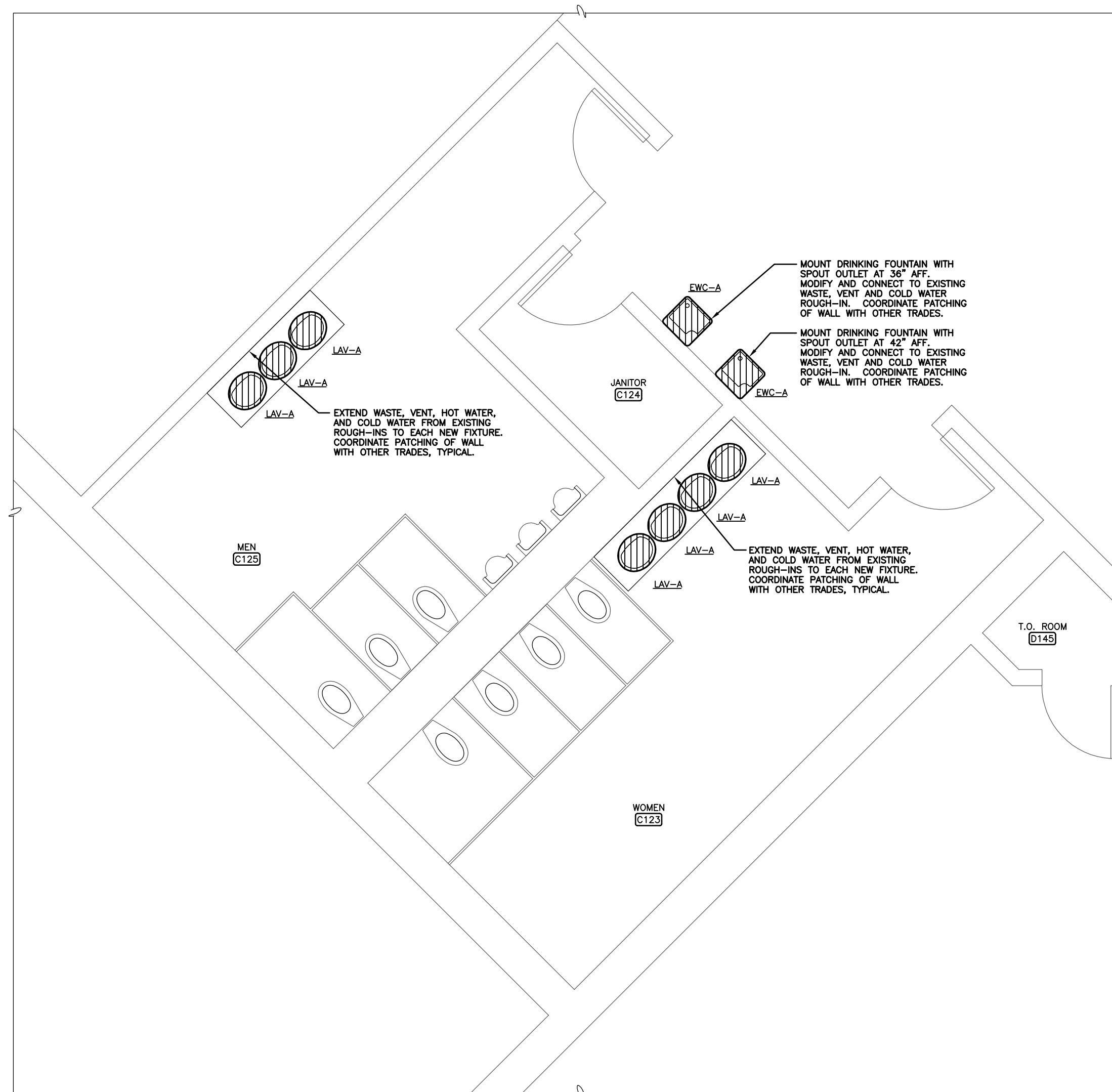
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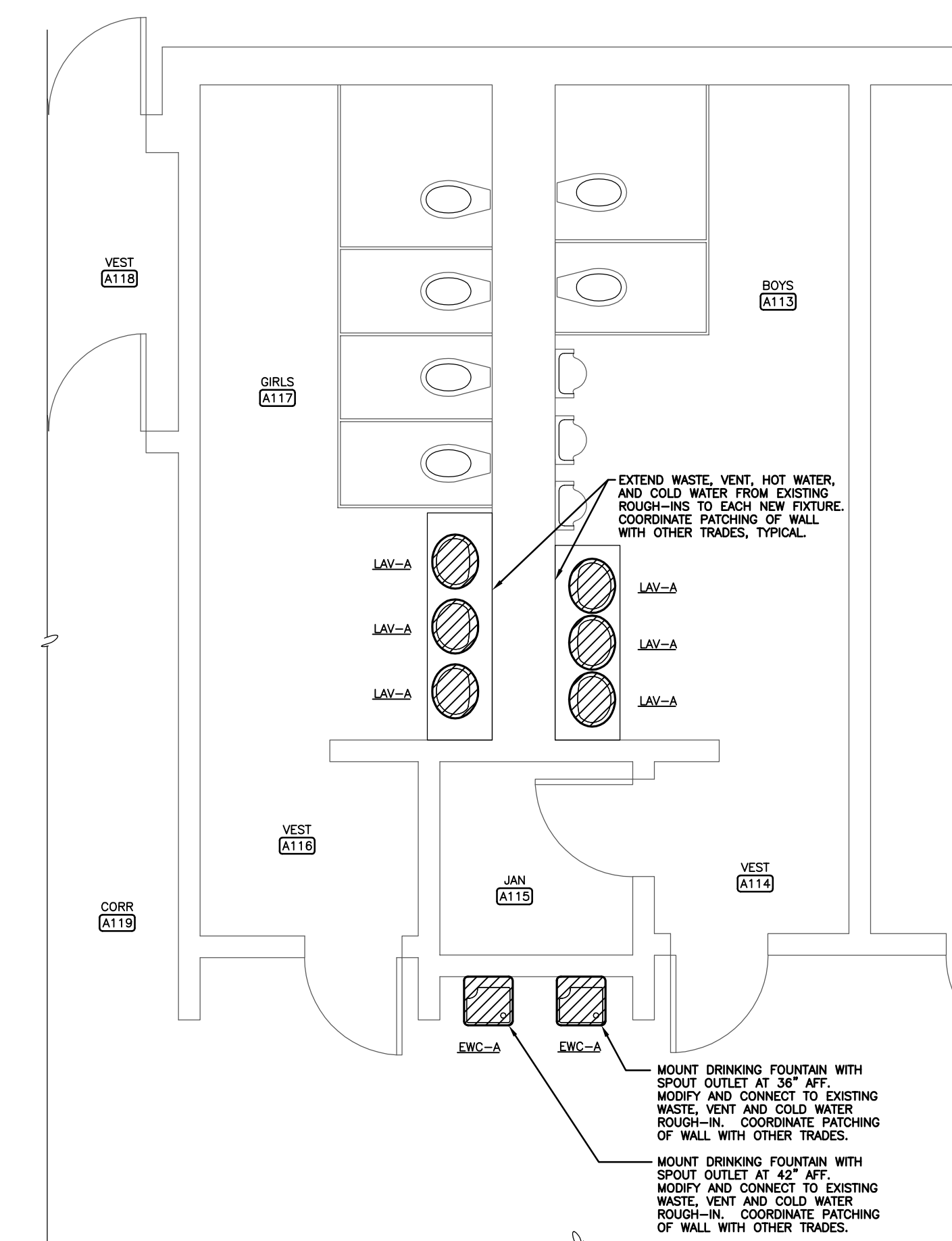
PARTIAL PLAN - PLUMBING - AREA 4
 1/4" = 1'-0"



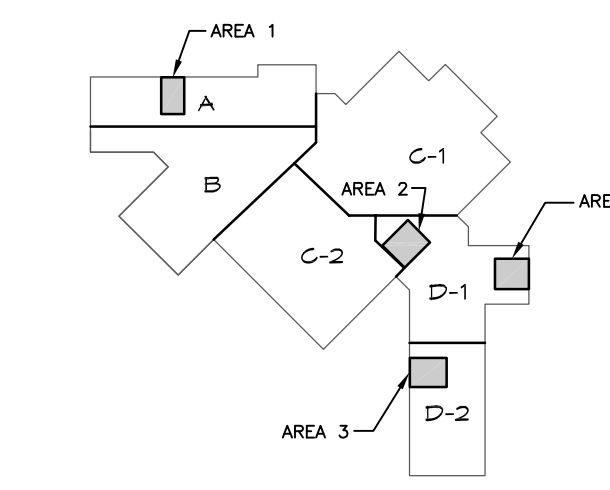
PARTIAL PLAN - PLUMBING - AREA 3
 1/4" = 1'-0"



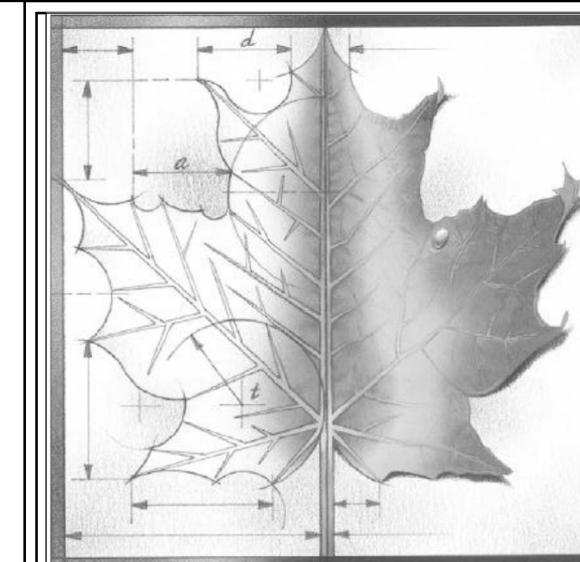
PARTIAL PLAN - PLUMBING - AREA 2
 1/4" = 1'-0"



PARTIAL PLAN - PLUMBING - AREA 1
 1/4" = 1'-0"



KEY PLAN
 NTS



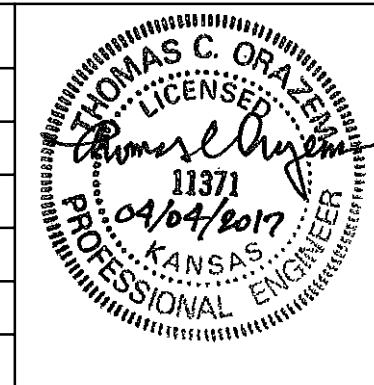
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Project Number:

Date: **04/04/2017**

Project Name:

USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS

Project Address:

1701 Kaw Valley Road Wamego, KS 66547

Sheet Title:

PLUMBING PLAN

Sheet:

P201

OF: **12**

Job No. 15011-1

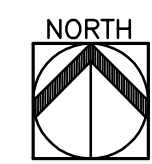
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MOUNT DRINKING FOUNTAIN WITH SPOUT OUTLET AT 42" AFF. MODIFY AND CONNECT TO EXISTING WASTE, VENT AND COLD WATER ROUGH-IN. COORDINATE PATCHING OF WALL WITH OTHER TRADES.

MOUNT DRINKING FOUNTAIN WITH SPOUT OUTLET AT 36" AFF. MODIFY AND CONNECT TO EXISTING WASTE, VENT AND COLD WATER ROUGH-IN. COORDINATE PATCHING OF WALL WITH OTHER TRADES.

EXTEND WASTE, VENT, HOT WATER, AND COLD WATER FROM EXISTING ROUGH-INS TO EACH NEW FIXTURE. COORDINATE PATCHING OF WALL WITH OTHER TRADES, TYPICAL.

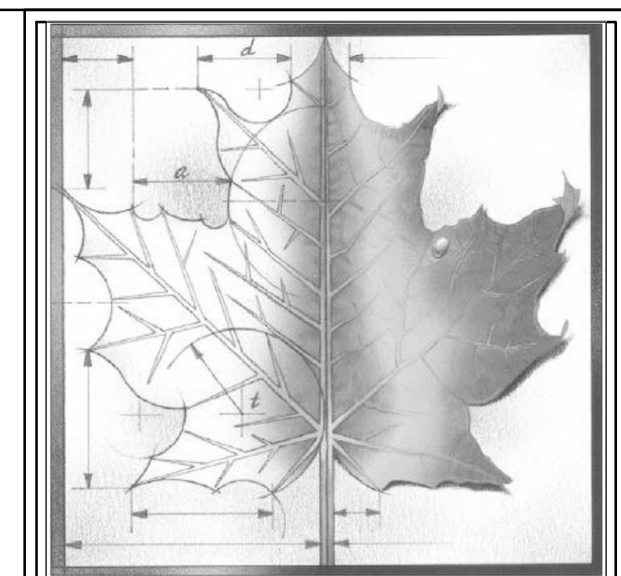


PARTIAL PLAN - PLUMBING - AREA 5
1/4" = 1'-0"



KEY PLAN
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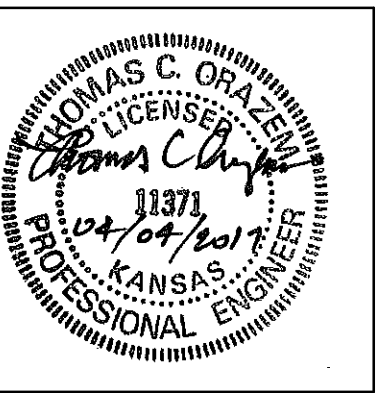
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Project Number:
Date: 04/04/2017

Project Name:
USD 320 WAMEGO MIDDLE SCHOOL IMPROVEMENTS

Project Address:
1701 Kaw Valley Road
Wamego, KS 66547

Sheet Title:
PLUMBING PLAN

Sheet:
P202
OF: 12

5

4

3

2

1

PARKING LIGHT FIXTURE SCHEDULE				
MARK	SIZE	MANUF.	DESCRIPTION	LAMP
A	13-15/16" x 26-13/16" x 2-3/4"	Lumark	Series PRV Preval area site fixture with heavy-duty, single-piece, die-cast aluminum housing, polyester powder coated finish, low profile design, U.L. listed for wet location, -40 degree F minimum operating temperature, thermally isolated driver, and hand-hole access at base of pole. Minimum 70 CRI, and 80% rated lumen output for 100,000 hours. Provide fixture with 4,000K lumen package producing 6,192 lumens at 57 watts, Type III throw. Provide type PS5-07-30WT square straight steel pole, 15' high, 5" nominal shaft dimension, vibration dampener, 0.188" (7 gauge) wall thickness, with 2-3/8" tenon mounting, and (2) fixtures per pole. Finish for fixture and pole to match existing parking lot.	57W LED

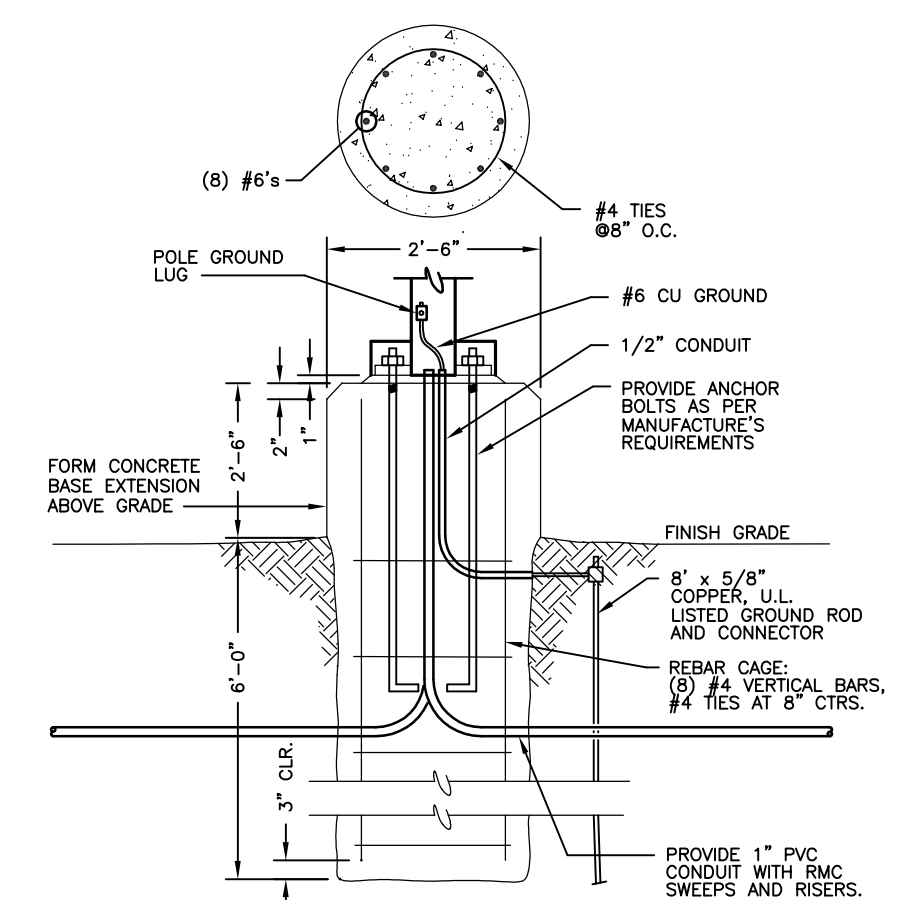
NOTES:
 1. All fixtures to be supplied at 480 volt AC operation.
 2. See A/E101 for pole mounting base detail.
 3. Pole and fixture must meet windspeed test rating of 90 mph.

GENERAL ELECTRICAL NOTES

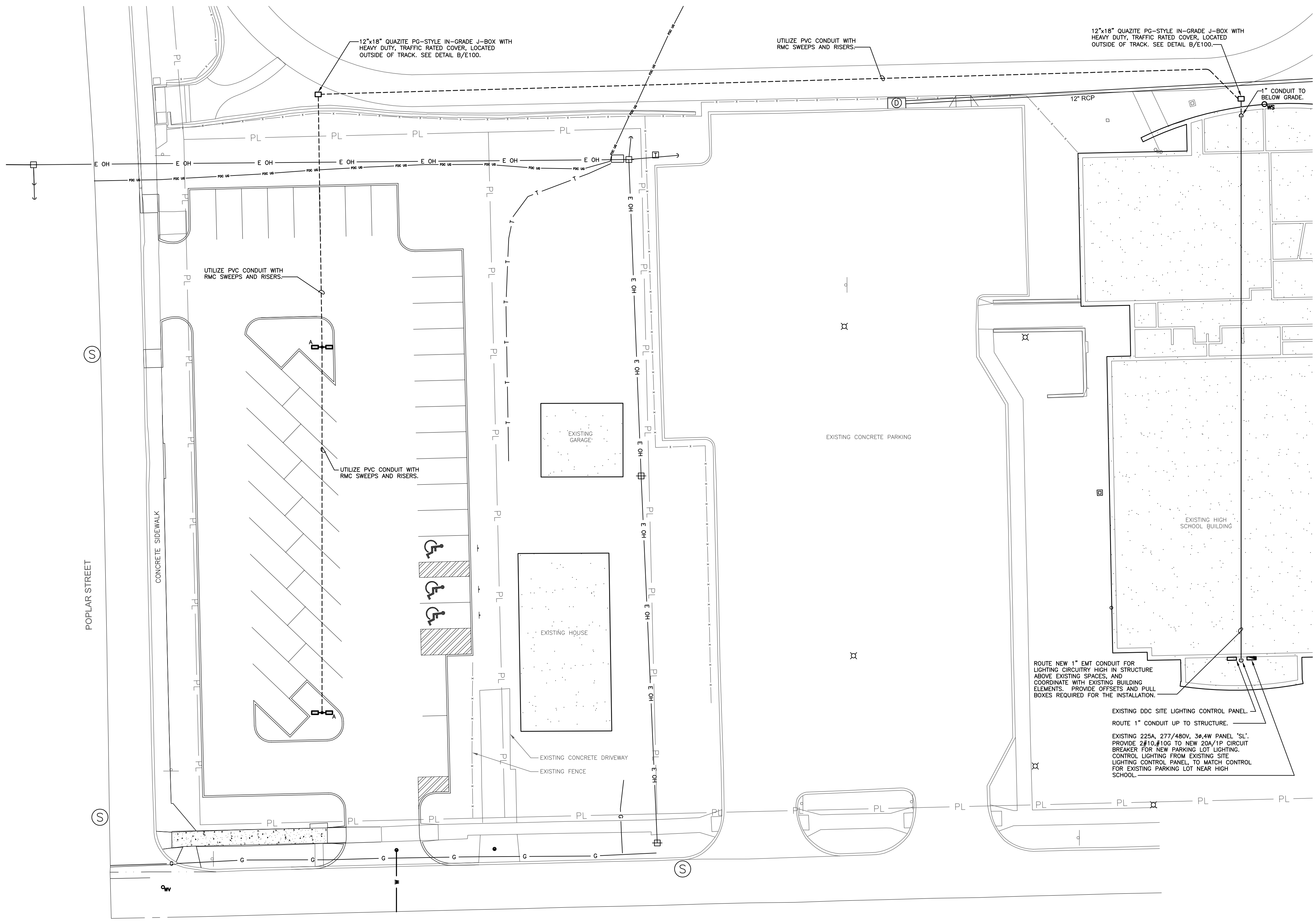
- Do not scale these drawings.
- These drawings were produced from original drawings, field survey, and measurements. Existing site and building characteristics which are represented on these drawings are believed to be accurate. However, the Contractor shall verify all conditions, materials, and sizes at the site. The Contractor shall verify locations and sizes of all below grade and above grade circuitry, and modify as required for new work.
- Submittal of detailed electrical conduit installation shop drawings are not required. However, the Contractor shall be responsible for field verification of all dimensions and clearances for all system layouts. This shall be accomplished prior to installation.
- These drawings are a schematic representation of the work that is to be accomplished by this Contract.
- Lack of coordination between trades will not be a basis for change orders. Rework of already completed work to accommodate other trades will be performed at the Contractors' expense.
- Where services to existing equipment, devices or systems which are to remain are interrupted in this work, such services shall be restored so that the existing systems are left in working order.
- See Specifications for additional requirements.
- Coordinate cutting and patching of walls, floors, ceilings, concrete and asphalt with General Contractor. See specification section 017300.

ELECTRICAL SYMBOLS LEGEND

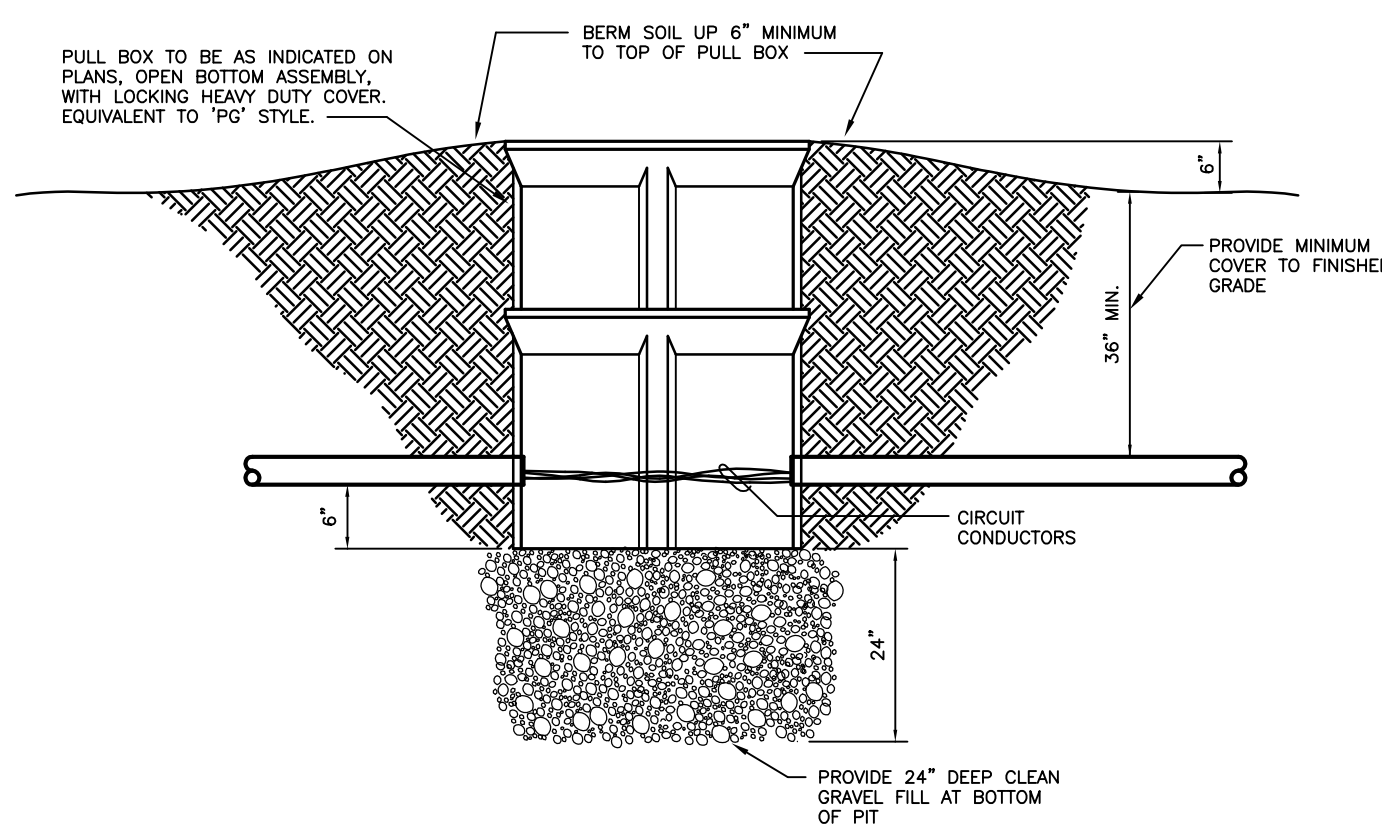
	Flush junction box
	Electrical disconnect switch
	Conduit concealed in wall or ceiling
	In-floor conduit
	Homerun to panelboard with conductors as indicated. Do not share neutrals unless noted otherwise.
	Panelboard
	Transformer
	Electrical meter
	Existing device
	Circuit breaker
	Unless noted otherwise
	Above finished floor
	Not in contract
	Typical
	General Contractor



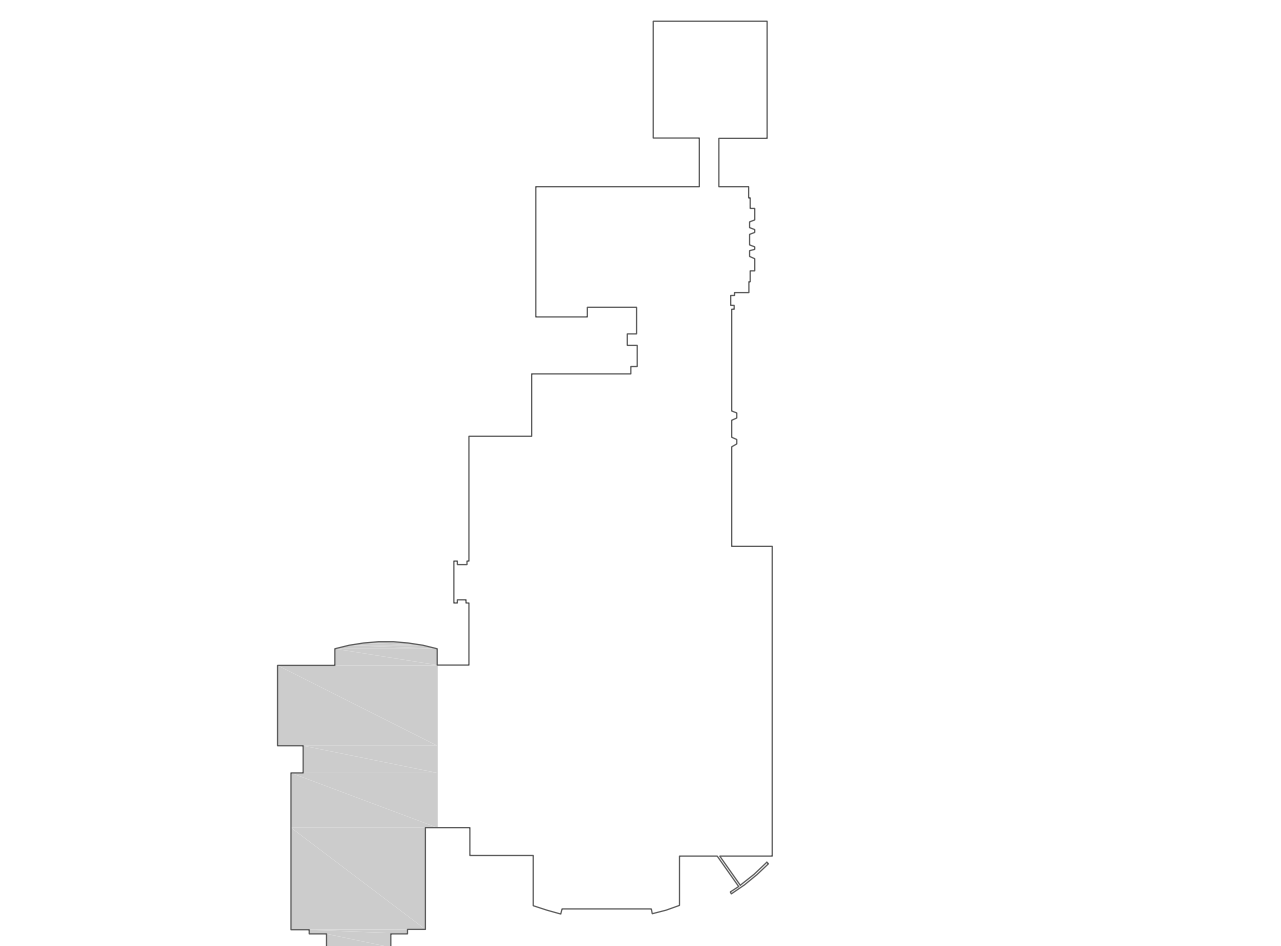
NOTES:
 1. Utilize wet location rated connectors for all wire terminations inside of the pole.
 2. Before connecting ungrounded conductors to the circuit breaker, test the continuity of the grounding conductor from the pole back to the panel.



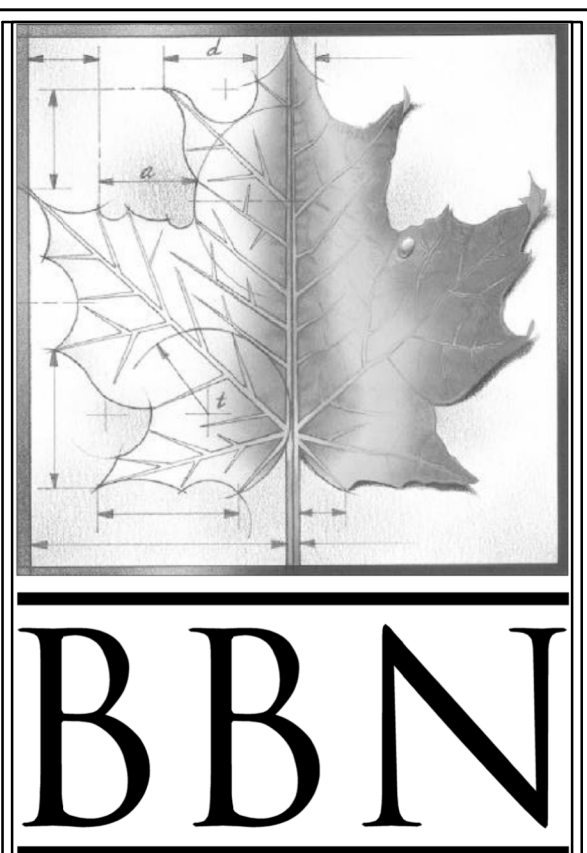
A PARKING LOT POLE BASE DETAIL
NO SCALE



B IN-GRADE PULL BOX DETAIL
NO SCALE



8th & POPLAR PARKING LOT LIGHTING PLAN
1" = 20'



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Addendum 1 - 4-6-17

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4-6-17	

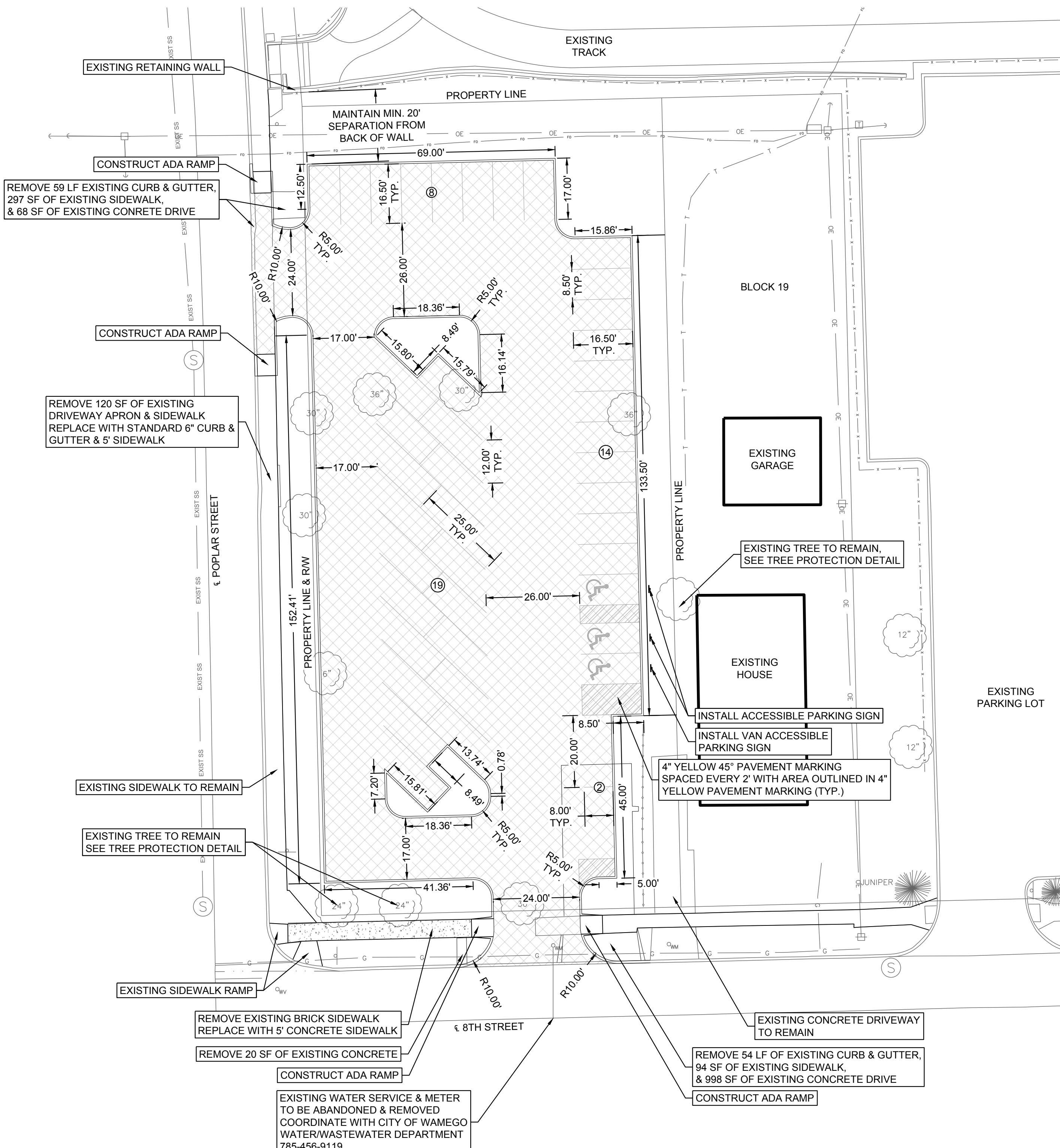


Project Number:
 Date: **04/04/2017**
 Project Name:
USD 320 WAMEGO 8th & POPLAR PARKING LOT
 Project Address:
Wamego, KS 66547

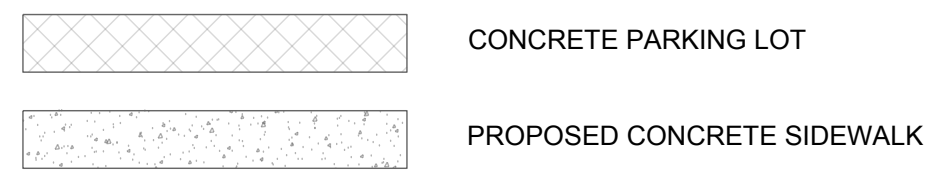
Sheet Title:
ELECTRICAL
 Sheet:
E101
 OF: 1

Job No. 15011-1

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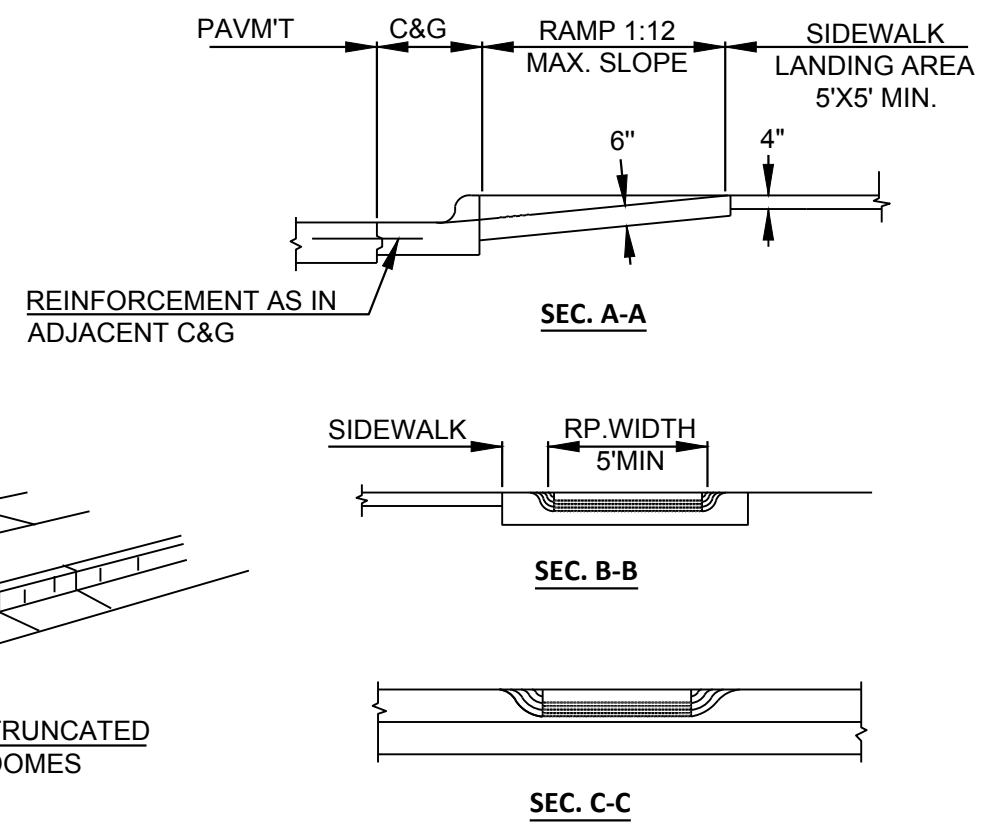
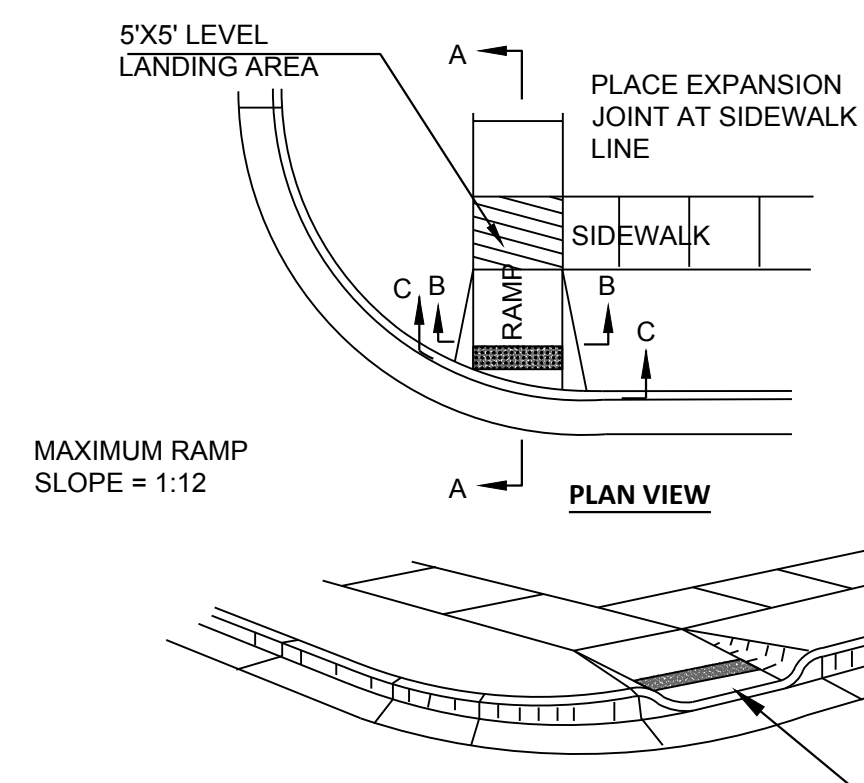
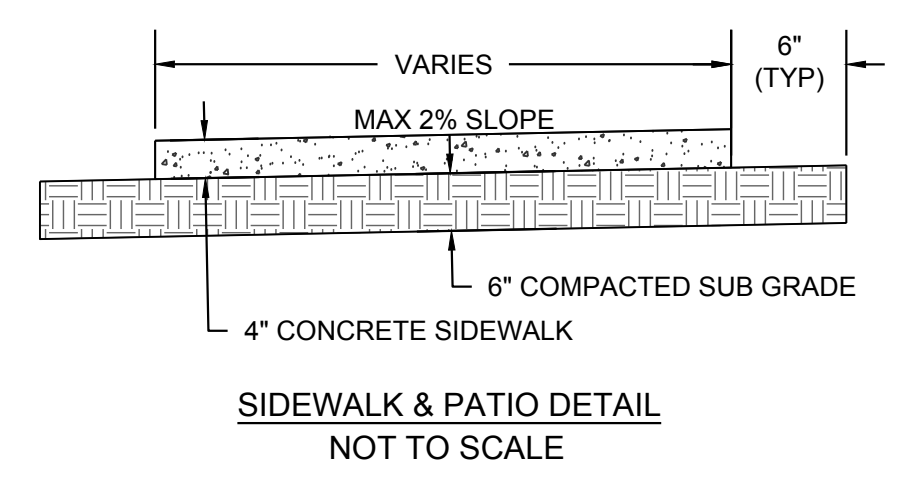
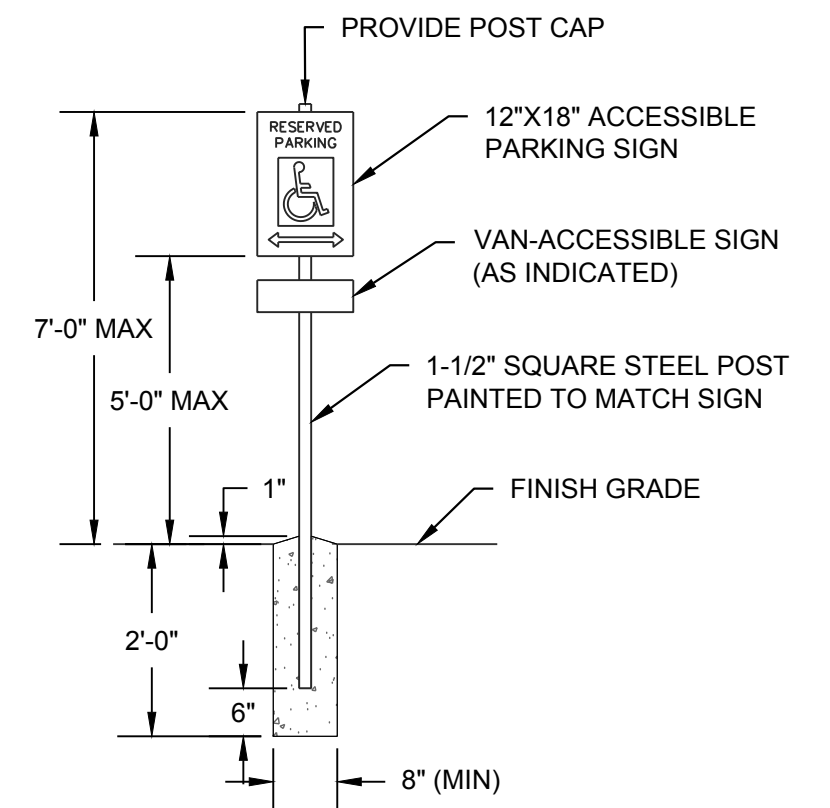
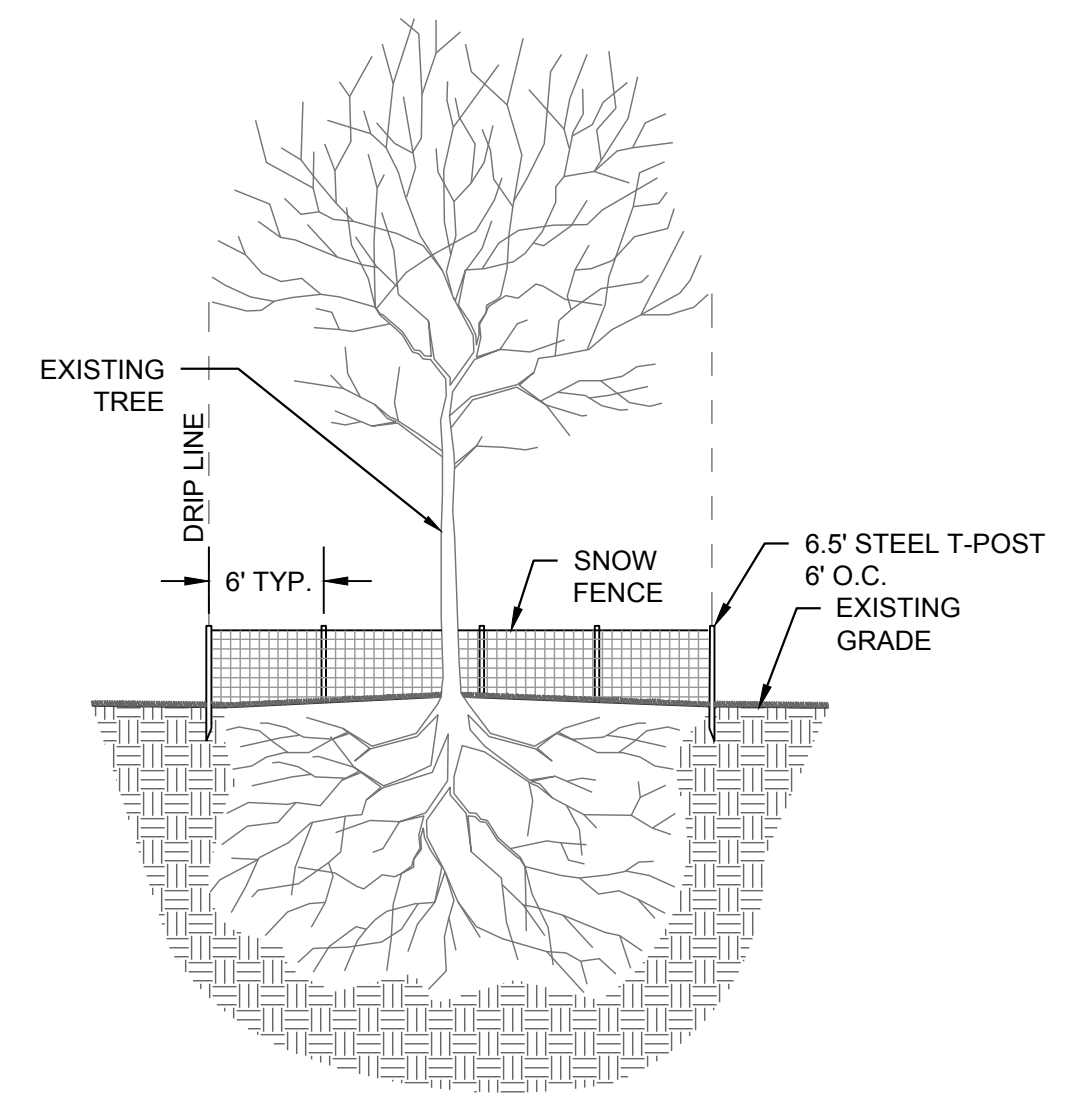


LEGEND



NOTES:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS AND APPROVALS FROM APPROPRIATE REGULATORY AGENCIES (IF APPLICABLE) PRIOR TO COMMENCING THE WORK.
- ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF THE PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION WITH AND IN ACCORDANCE WITH REGULATIONS OF THE AUTHORITIES CONCERNED.
- ALL EXISTING STRUCTURES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS NOTED OTHERWISE. THE REMOVAL OF THESE STRUCTURES IS SUBSIDIARY.
- WHEELCHAIR SYMBOLS ARE NOT INCLUDED IN SCOPE OF WORK. SHOWN TO DEPICT LOCATION OF ACCESSIBLE STALLS FOR PERMITTING.
- ALL EXISTING SIDEWALKS ARE TO REMAIN UNLESS OTHERWISE NOTED.
- FOR CONSTRUCTION OF NEW SIDEWALK, PARTIAL PANEL REMOVAL OF EXISTING SIDEWALK WILL NOT BE ALLOWED. IF A PARTIAL PANEL IS REMOVED THEN ENTIRE PANEL SHALL BE REMOVED AND REPLACED AS NEEDED.
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- TREES AND SHRUBS WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN CONFLICT WITH PROPOSED NEW CONSTRUCTION AND NOT SHOWN TO BE REMOVED SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- TREE PROTECTION MEASURES SHALL IMPLEMENTED FOR ANY TREE WHICH WILL HAVE CONSTRUCTION ACTIVITY LOCATED WITHIN 5 FEET OF THE DRIP LINE.
- MINIMIZE DISTURBANCE OF ROOTS WITHIN DRIP LINES OF TREES WHERE CONSTRUCTION ACTIVITY IS PLANNED.
- INSTALL TEMPORARY TREE PROTECTION MEASURES PRIOR TO COMMENCING ANY REMOVALS OR SITE DEMOLITION WORK. INSPECT TREE PROTECTION FENCE DAILY, AND MAINTAIN THROUGHOUT THE DURATION OF CONSTRUCTION. REMOVE FENCE WHEN CONSTRUCTION IS COMPLETE.
- DO NOT STORE MATERIALS, DEBRIS, OR SALVAGED OR EXCAVATED MATERIALS INSIDE THE TREE PROTECTION ZONE. DO NOT PARK VEHICLES OR EQUIPMENT INSIDE THE TREE PROTECTION ZONE.
- ALL DEMOLITION DEBRIS SHALL BE REMOVED FROM THE SITE. NO ON-SITE BURYING OF DEBRIS WILL BE ALLOWED.
- ALL HAUL SITES SELECTED FOR COLLECTION OF DEBRIS SHALL BE APPROVED BY THE OWNER/ENGINEER.
- IN LOCATIONS WHERE PROPOSED IMPROVEMENTS ARE NOT LOCATED, REMOVE STUMPS, ROOTS, AND OTHER DEBRIS PROTRUDING THROUGH GROUND SURFACE TO A DEPTH OF 24 INCHES BELOW FINISH SUBGRADE ELEVATION. IN ALL OTHER LOCATIONS COMPLETE REMOVAL IS REQUIRED.
- ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE OWNER.



CAUTION - NOTICE TO CONTRACTOR:

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST THE EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

SAFETY NOTICE TO CONTRACTOR:

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER:

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER SMH CONSULTANTS NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE SMH CONSULTANTS INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON THE SITE.

NOTE:

- 5' RAMP SHALL BE STANDARD FOR ALL NEW SIDEWALK CONSTRUCTION
- AT THE DISCRETION OF THE CITY ENGINEER 4' RAMPS SHALL BE ALLOWED WHEN REPLACING EXISTING SIDEWALK

SIDEWALK RAMP TYPE 1 (NOT TO SCALE)

SMH CONSULTANTS

2017 Vanesta Place, Suite 110
Manhattan, KS 66503
P (785)776-0541 • F (785)776-9760

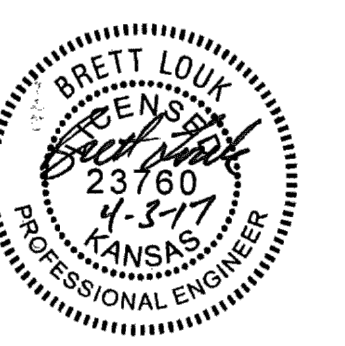
236 San Jose Street, Suite 127
Dodge City, KS 67801
P (620)255-1952 • F (620)371-6579
www.smhconsultants.com

Civil Engineering • Land Surveying
Landscape Architecture

USD 320 - WAMEGO HIGH SCHOOL

CONSTRUCTION DOCUMENTS

WAMEGO, KANSAS



NOTE:

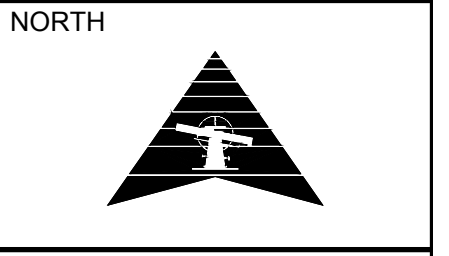
THE CONTRACTOR SHALL PROVIDE AN ACCESSIBLE PARKING SIGN FOR EACH ACCESSIBLE PARKING SPACE INDICATED.

THE CONTRACTOR SHALL PROVIDE A VAN ACCESSIBLE SIGN AT ACCESSIBLE PARKING SPACES AS INDICATED.

THE ACCESSIBLE PARKING SIGNS PROVIDED SHALL CONFORM TO TYPE "R7-8" IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

REVISION DESCRIPTION	Changed Sheet Size to 24" x 36"
REVISION DATE	4-6-17

SITE PLAN



SCALE: 1" = 20'

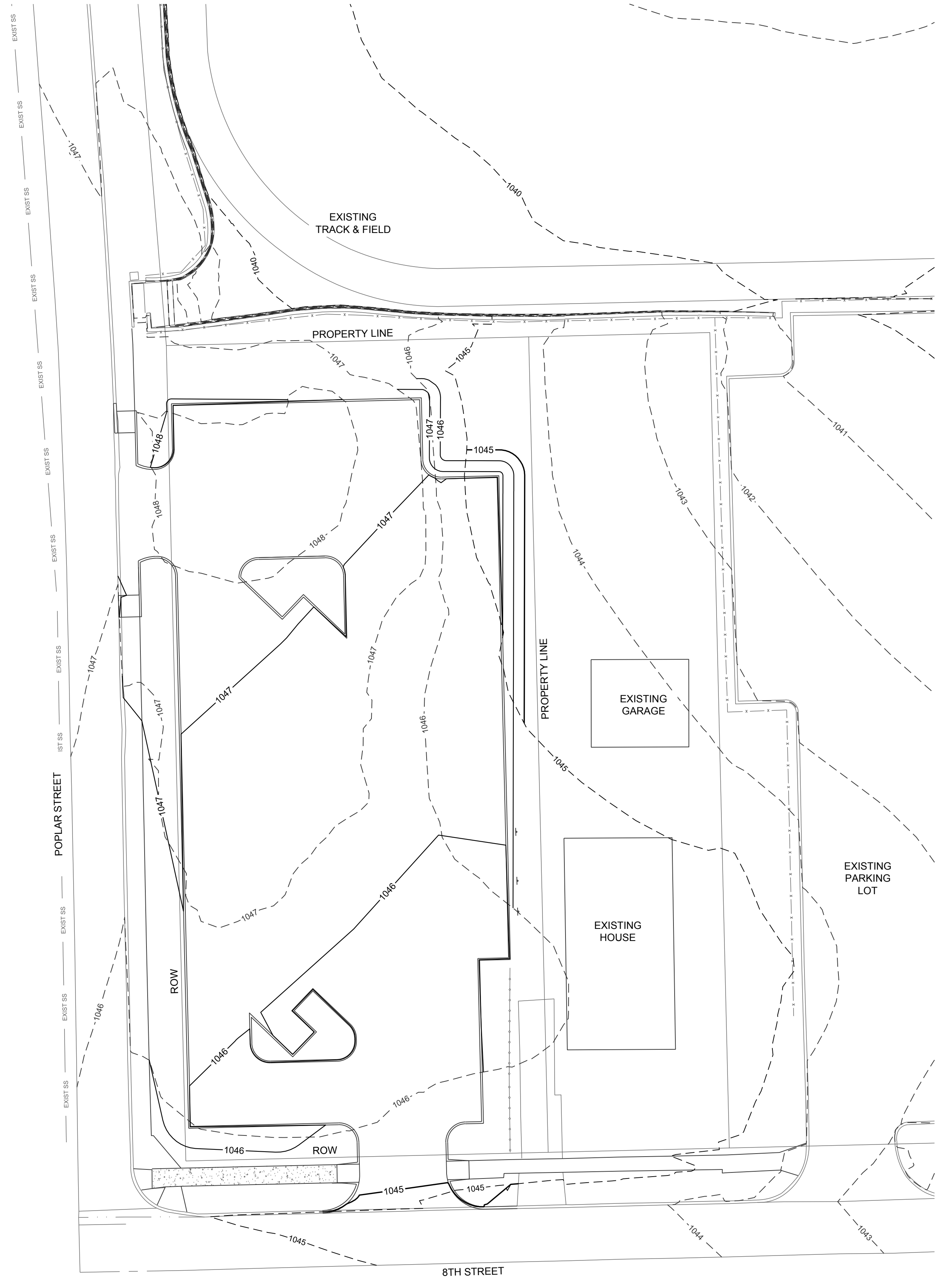
PROJECT #: 1702MN4004
CHECKED BY: BML
DRAWN BY: KMM

DATE: 4/3/2017

SHEET #

1

TOTAL SHEETS 7



LEGEND

- - - 2854 1' CONTOUR INTERVAL (EXISTING GROUND)
- - - 2855 5' CONTOUR INTERVAL (EXISTING GROUND)
- - - 2856 5' CONTOUR INTERVAL (PROPOSED GROUND)
- - - 2854 1' CONTOUR INTERVAL (PROPOSED GROUND)

NOTES

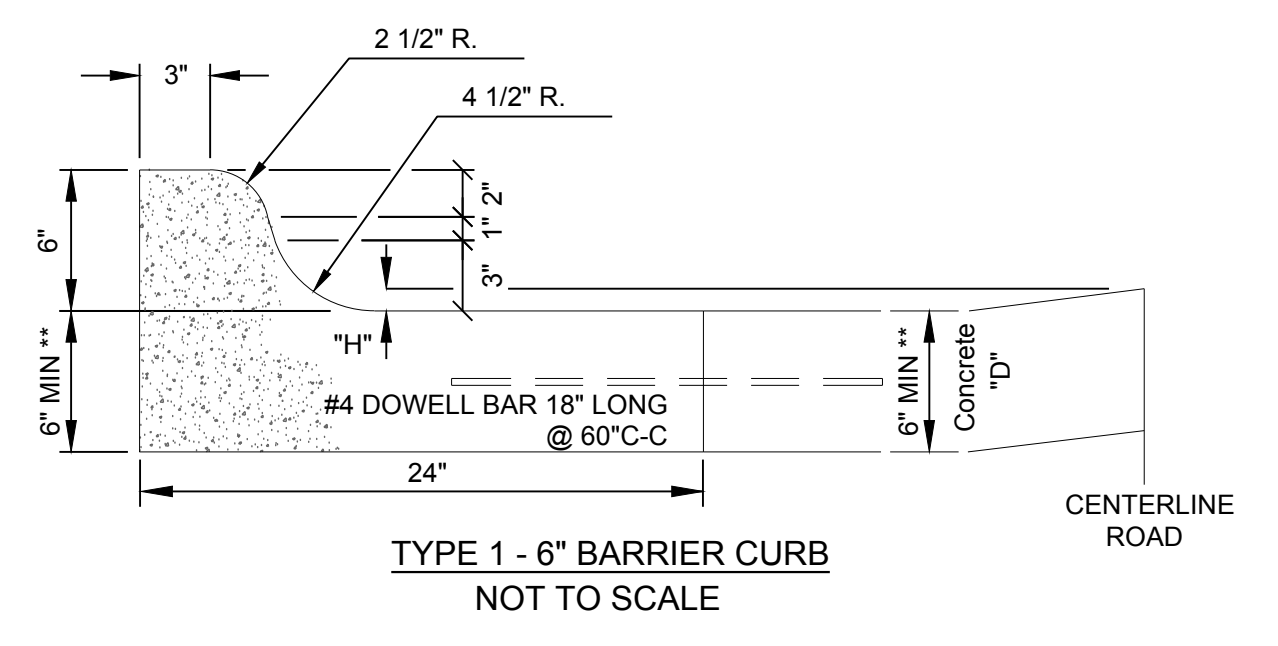
ALL SOIL BROUGHT TO THE SITE AND IN SITU SHALL BE COMPACTED BY ROLLING WITH A SHEEPSFOOT ROLLER OR BY MECHANICAL TAMPING. THE SHEEPSFOOT ROLLER, WHEN FULLY LOADED, SHALL HAVE A LOAD ON EACH TAMPER FOOT NOT LESS THAN 200 POUNDS PER SQUARE INCH OF CROSS-SECTIONAL AREA. ENOUGH MOISTURE SHALL BE PRESENT IN THE SOIL TO OBTAIN A DENSITY EQUAL TO OR GREATER THAN 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST BEFORE PLACING THE NEXT LIFT. EACH LIFT SHALL CONSIST OF 8-INCH LOOSE LIFTS OR LESS PRIOR TO COMPACTION. FILL MATERIAL SHALL BE APPROVED BY A LICENSED ENGINEER. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A SUITABLE NUMBER OF PROCTORS FOR VARIOUS FILL MATERIAL.

THE CROSS SLOPES OF ALL SIDEWALKS SHALL BE 2% OR LESS.
ALL STRIPPED TOPSOIL SHALL BE STOCKPILED FOR RE-USE.

HORIZONTAL & VERTICAL CONTROL

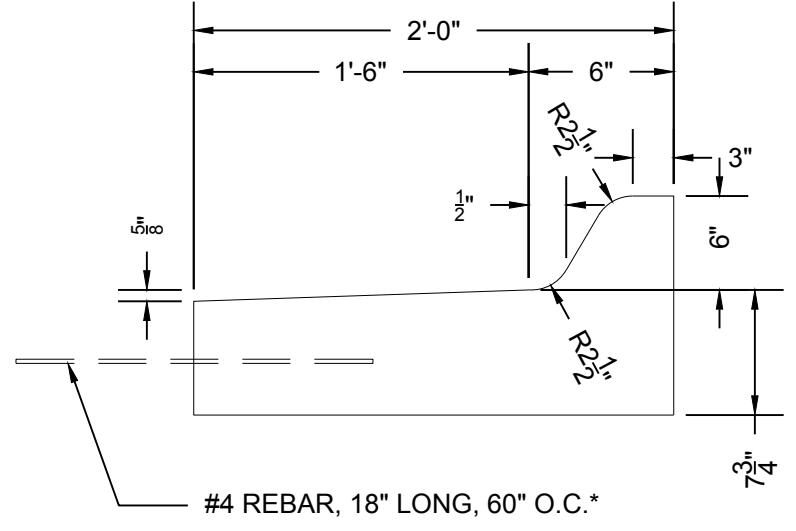
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HCP #2:	N:323164.935	E:1792395.733	ELEV:1018.27
HCP #3:	N:322719.126	E:1791984.832	ELEV:1045.23
HCP #4:	N:322430.049	E:1792055.448	ELEV:1046.86

- * DOWEL BARS USED ONLY WITH 24" CURB & GUTTER. NOT REQUIRED FOR MONOLITHIC CURB CONCRETE PAVEMENT.
- ** TOE OF GUTTER SHALL MATCH THICKNESS OF EXISTING OR PROPOSED PAVEMENT



TYPE 1 - 6" BARRIER CURB NOT TO SCALE

- * DOWEL BARS USED ONLY WITH 24" CURB & GUTTER. NOT REQUIRED FOR MONOLITHIC CURB CONCRETE PAVEMENT.
- ** TOE OF GUTTER SHALL MATCH THICKNESS OF EXISTING OR PROPOSED PAVEMENT



24" REVERSE CURB & GUTTER DETAIL NOT TO SCALE



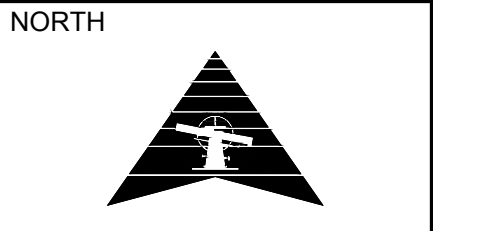
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USD 320 - WAMEGO HIGH SCHOOL

CONSTRUCTION DOCUMENTS
WAMEGO, KANSAS



REVISION DATE	4-6-17	REVISION DESCRIPTION	Changed Sheet Size to 24" x 36"
REVISION DATE	1	REVISION DESCRIPTION	



SCALE: 1" = 20'
PROJECT #: 1702MN4004
CHECKED BY: BML
DRAWN BY: KMM
DATE: 4/3/2017
SHEET #
2
TOTAL SHEETS
7

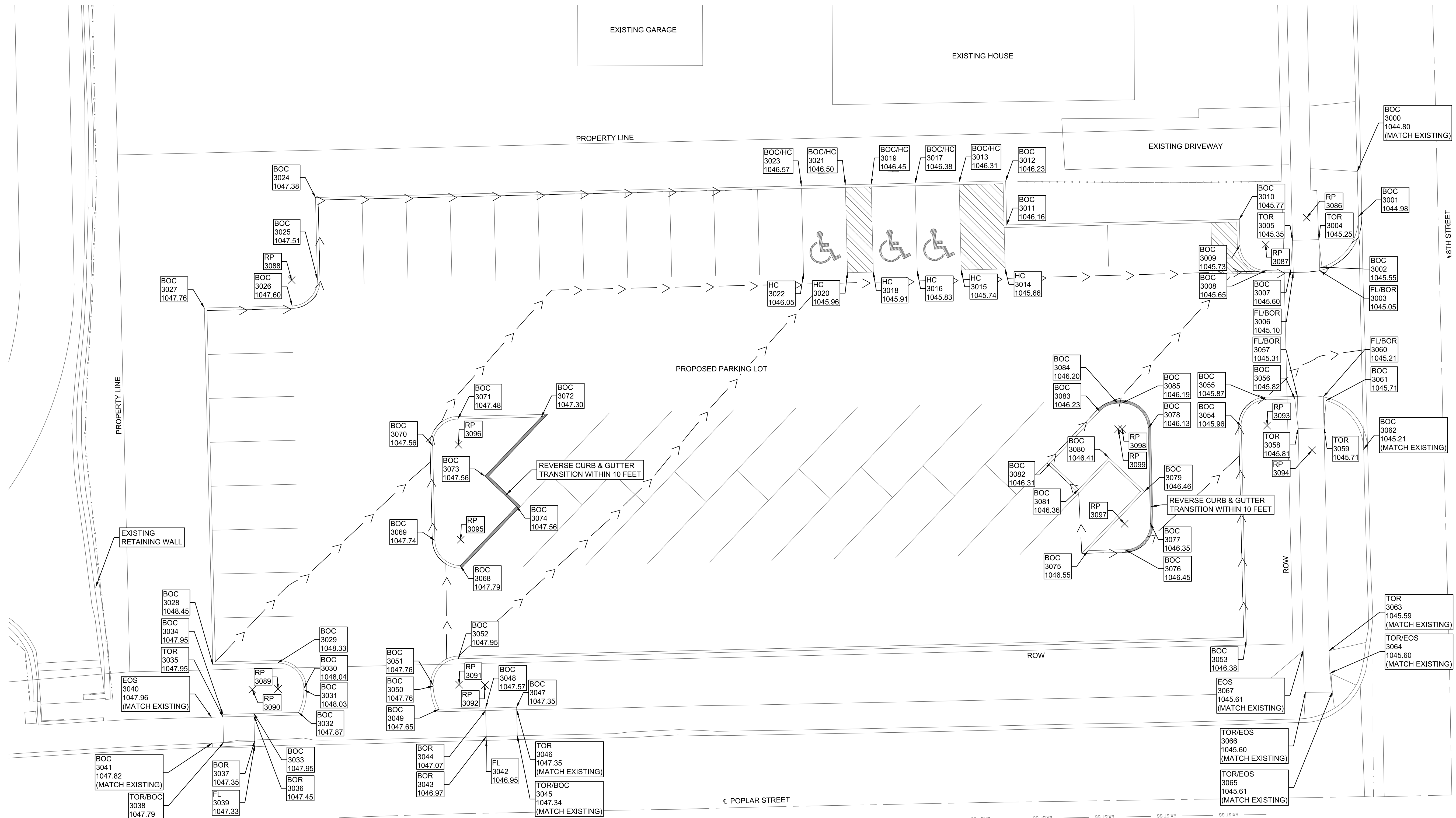
USD 320 - WAMEGO HIGH SCHOOL

CONSTRUCTION DOCUMENTS

WAMEGO, KANSAS



HORIZONTAL & VERTICAL CONTROL PLAN



POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3000	322325.96	1792100.08	1044.80	BOC
3001	322325.75	1792091.36	1044.98	BOC
3002	322332.80	1792081.56	1045.55	BOC
3003	322333.24	1792080.89	1045.05	FL/BOR
3004	322333.41	1792086.89	1045.25	TOR
3005	322338.49	1792086.77	1045.35	TOR
3006	322338.34	1792080.55	1045.10	FL/BOR
3007	322338.83	1792081.04	1045.60	BOC
3008	322343.54	1792080.93	1045.65	BOC
3009	322348.65	1792085.81	1045.73	BOC
3010	322348.77	1792090.81	1045.77	BOC
3011	322393.76	1792089.73	1046.16	BOC
3012	322393.96	1792098.23	1046.23	BOC
3013	322402.96	1792098.01	1046.31	BOC/HC
3014	322394.06	1792081.22	1045.66	HC
3015	322402.55	1792081.02	1045.74	HC
3016	322411.05	1792080.81	1045.83	HC
3017	322411.46	1792097.81	1046.38	BOC/HC
3018	322419.55	1792080.61	1045.91	HC
3019	322419.96	1792097.61	1046.45	BOC/HC
3020	322424.55	1792080.49	1045.96	HC
3021	322424.95	1792097.49	1046.50	BOC/HC

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3022	322433.05	1792080.29	1046.05	HC
3023	322433.45	1792087.28	1046.57	BOC/HC
3024	322527.43	1792095.04	1047.38	BOC
3025	322527.05	1792079.18	1047.51	BOC
3026	322531.93	1792074.07	1047.60	BOC
3027	322548.92	1792073.66	1047.76	BOC
3028	322547.27	1792004.68	1048.45	BOC
3029	322534.77	1792004.98	1048.33	BOC
3030	322529.66	1792000.10	1048.04	BOC
3031	322529.65	1791999.81	1048.03	BOC
3032	322530.69	1791995.42	1047.87	BOC
3033	322539.34	1791995.21	1047.95	BOC
3034	322545.34	1791995.06	1047.95	BOC
3035	322545.33	1791994.56	1047.95	TOR
3036	322539.33	1791994.71	1047.45	BOR
3037	322539.21	1791999.86	1047.35	BOR
3038	322545.20	1791999.59	1047.79	TOR/BOC
3039	322539.18	1791999.07	1047.33	FL
3040	322547.53	1791994.50	1047.96	EOS
3041	322547.40	1791989.49	1047.82	FL
3042	322494.37	1791990.03	1046.95	BOC
3043	322494.39	1791990.76	1046.97	BOR

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3044	322494.52	1791995.79	1047.07	BOR
3045	322488.39	1791990.92	1047.34	TOR/BOC
3046	322488.52	1791995.94	1047.35	TOR
3047	322488.53	1791996.44	1047.35	BOC
3048	322494.53	1791996.29	1047.57	BOC
3049	322503.50	1791996.07	1047.65	BOC
3050	322504.66	1792000.52	1047.76	BOC
3051	322504.66	1792000.70	1047.76	BOC
3052	322499.78	1792005.82	1047.95	BOC
3053	322347.42	1792009.46	1046.38	BOC
3054	322348.41	1792050.80	1045.96	BOC
3055	322343.53	1792055.92	1045.87	BOC
3056	322338.04	1792056.05	1045.82	BOC
3057	322337.53	1792056.57	1045.31	FL/BOR
3058	322337.39	1792050.35	1045.81	TOR
3059	322332.39	1792050.46	1045.71	TOR
3060	322332.53	1792056.46	1045.21	FL/BOR
3061	322331.89	1792055.75	1045.71	BOC
3062	322324.72	1792046.35	1045.21	BOC
3063	322331.41	1792007.38	1045.59	TOR
3064	322331.25	1792003.02	1045.60	TOR/EOS
3065	322330.80	1791999.37	1045.61	TOR/EOS

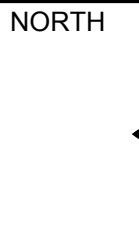
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3066	322335.98	1791999.33	1045.60	TOR/EOS
3067	322336.47	1792007.30	1045.61	EOS
3068	322498.42	1792023.83	1047.79	BOC
3069	322504.33	1792028.71	1047.74	BOC
3070	322504.77	1792047.06	1047.56	BOC
3071	322499.89	1792052.18	1047.48	BOC
3072	322483.75	1792052.57	1047.30	BOC
3073	322494.66	1792041.13	1047.56	BOC
3074	322488.51	1792035.27	1047.56	BOC
3075	322378.04	1792026.73	1046.55	BOC
3076	322370.84	1792026.91	1046.45	BOC
3077	322365.96	1792032.02	1046.35	BOC
3078	322366.40	1792050.37	1046.13	BOC
3079	322367.13	1792038.17	1046.46	BOC
3080	322374.00	1792044.72	1046.41	BOC
3081	322379.86	1792038.58	1046.36	BOC
3082	322385.27	1792043.74	1046.31	BOC
3083	322375.80	1792053.69	1046.23	BOC
3084	322372.30	1792055.23	1046.20	BOC
3085	322371.52	1792055.25	1046.19	BOC

POINT #	NORTHING	EASTING	DESCRIPTION
3086	322335.75	1792091.12	RP
3087	322343.66	1792085.93	RP
3088	322532.04	1792079.06	RP
3089	322534.65	1791999.98	RP
3090	322539.65	1791999.85	RP
3091	322499.66	1792000.82	RP
3092	322494.66	1792000.75	RP
3093	322343.41	1792050.92	RP
3094	322334.71	1792046.13	RP
3095	322499.33	1792028.83	RP
3096	322499.77	1792047.18	RP
3097	322370.96	1792031.90	RP
3098	322371.40	1792050.25	RP
3099	322372.18	1792050.24	RP

LEGEND

- BOC BACK OF CURB
- BOR BOTTOM OF RAMP
- TOR TOP OF RAMP
- EOS EDGE OF SIDEWALK
- FL FLOW LINE
- RP RADIUS POINT
- HC ACCESSIBLE STALL
- > DIRECTION OF FLOW

REVISION DESCRIPTION
Changed Sheet Size to 24" x 36"



SCALE: 1" = 10'

PROJECT #: 1702MN4004
CHECKED BY: BML
DRAWN BY: KMM

DATE: 4/3/2017

SHEET #

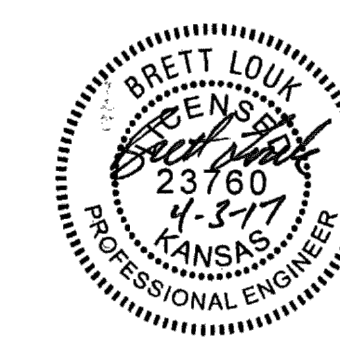
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TOTAL SHEETS
7

USD 320 - WAMEGO HIGH SCHOOL

CONSTRUCTION DOCUMENTS

WAMEGO, KANSAS

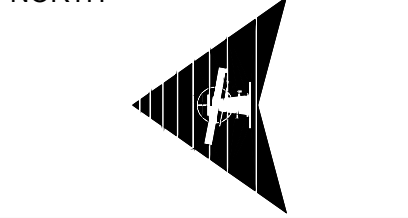


JOINTING PLAN

REVISION DESCRIPTION
Changed Sheet Size to 24" x36"

REVISION DATE
4-6-17

NORTH



SCALE: 1" = 10'

PROJECT #: 1702MN4004
CHECKED BY: BML
DRAWN BY: KMM

DATE: 4/3/2017

SHEET #

4

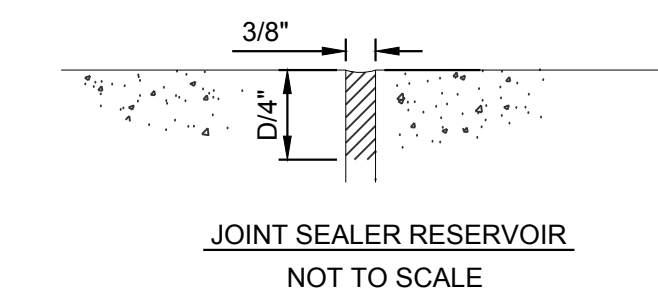
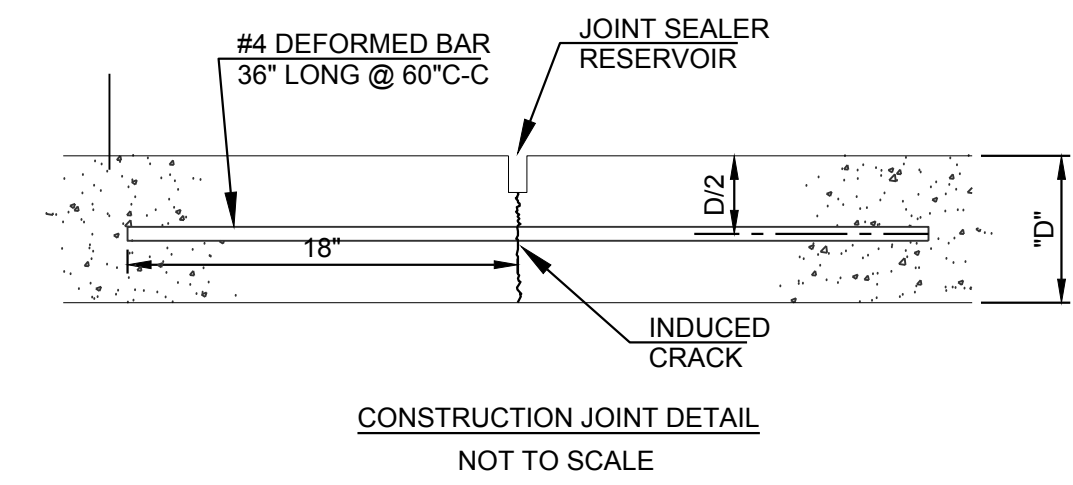
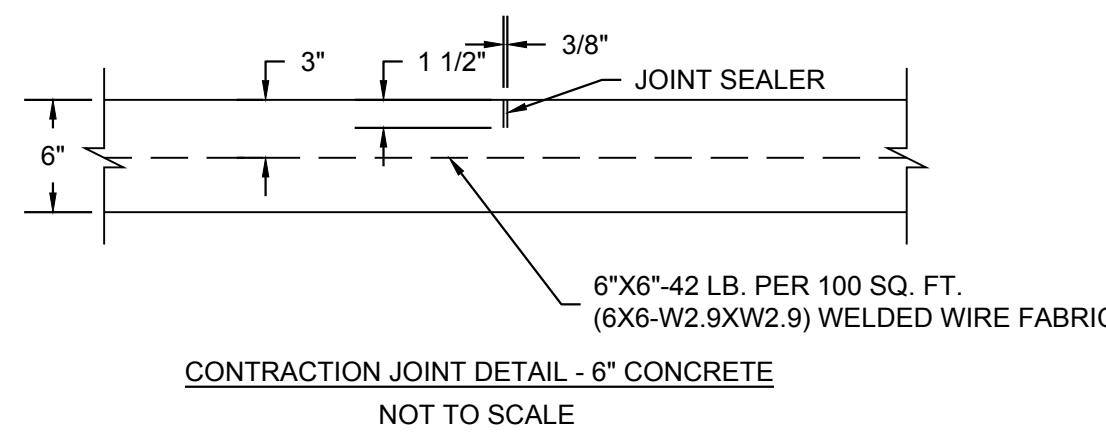
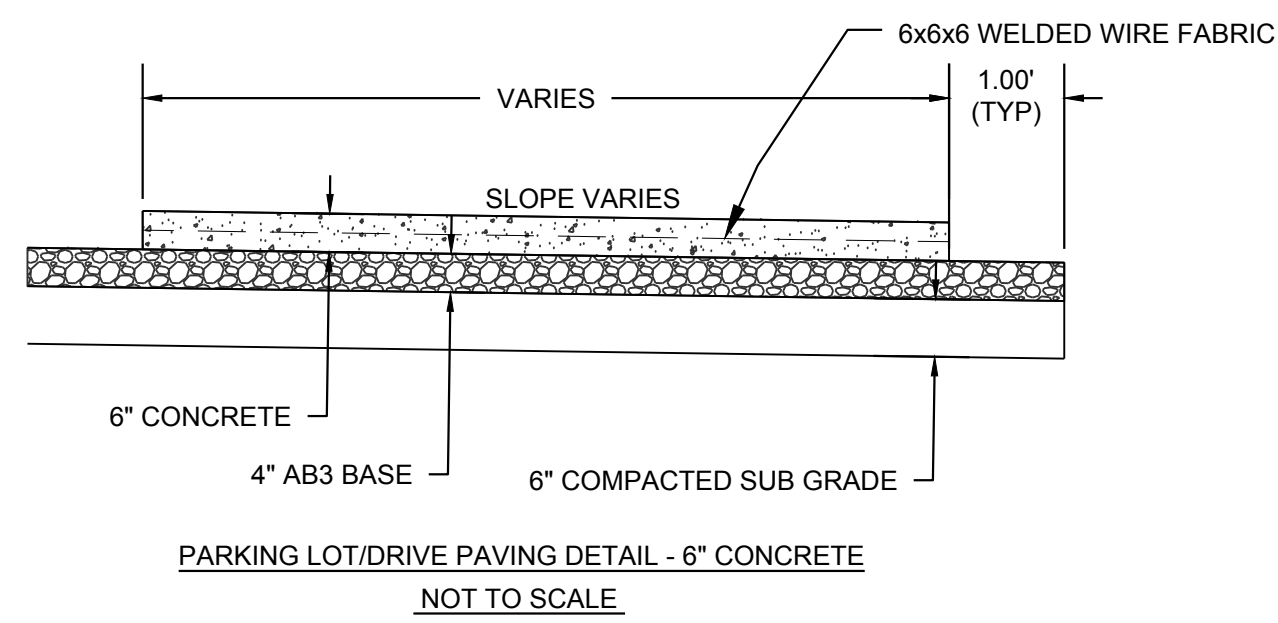
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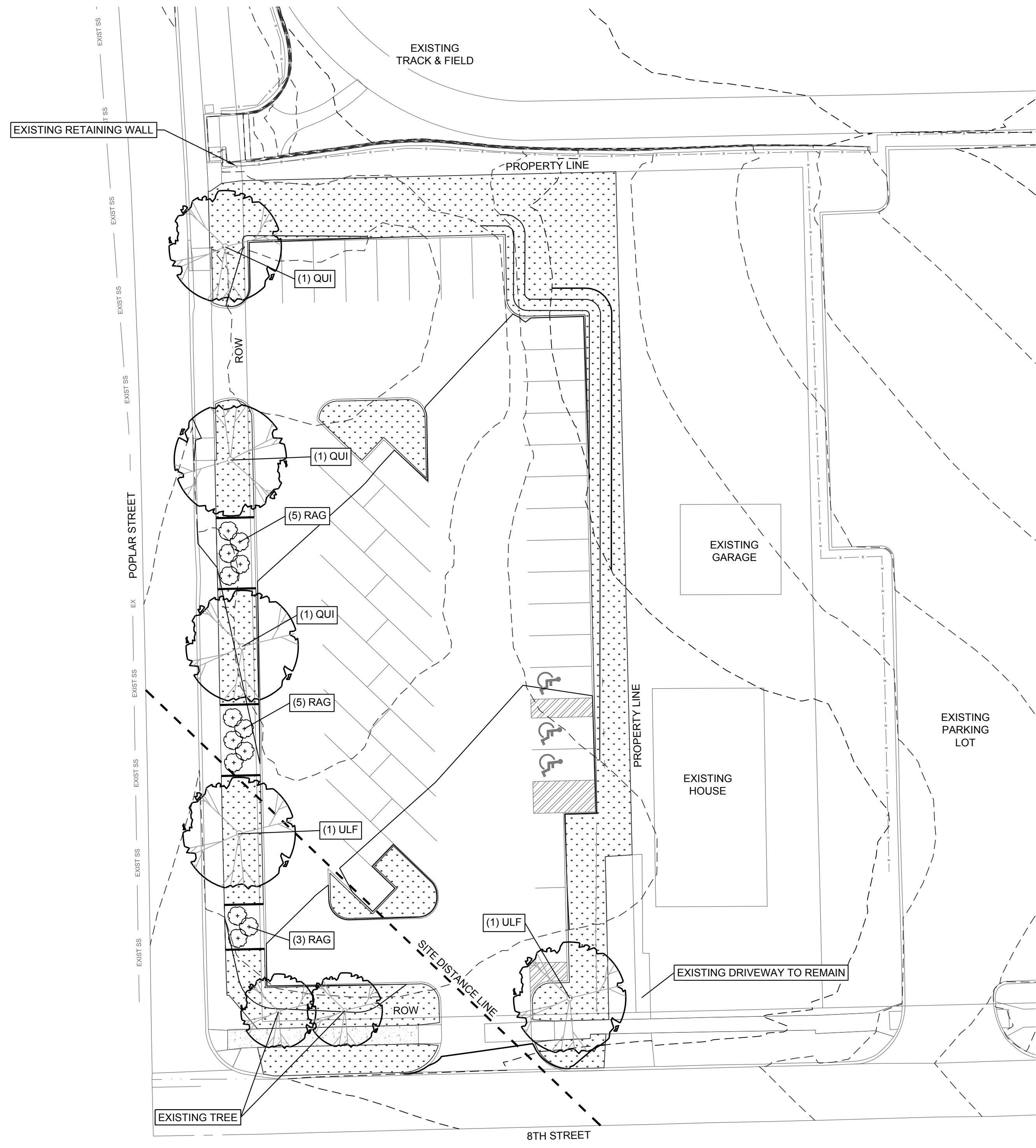
7



EXISTING RETAINING WALL

NOTES:
ALL PARKING PAVEMENT IS 6" CONCRETE WITH 12' MAXIMUM JOINT SPACING.
ALL SIDEWALKS ARE 4" CONCRETE WITH 5' MAXIMUM JOINT SPACING.





PLANT LIST

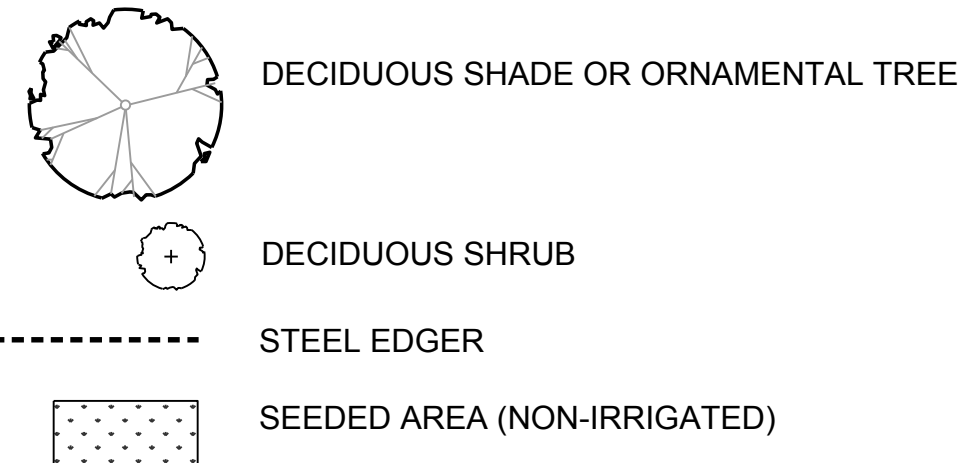
SHADE TREES

3	QUI	SHINGLE OAK Quercus imbricaria	1 1/2" CAL. B&B SINGLE TRUNK
2	ULF	FRONTIER ELM Ulmus 'Frontier'	1 1/2" CAL. B&B SINGLE TRUNK

DECIDUOUS SHRUBS

13	RAG	GRO-LOW SUMAC Rhus aromatica 'Gro-Low'	3 GAL. 18"-24" HT.
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LEGEND



PERMANENT SEED MIX
SEEDING RATE
BROAD CAST: 10 LB. PER 1000 SQ. FT.

MIX
K-31 FESCUE

LANDSCAPE NOTES

- THIS LANDSCAPE ARCHITECTURAL SITE PLAN IS TO BE USED IN CONJUNCTION WITH THE CIVIL, IRRIGATION, MECHANICAL, ELECTRICAL, AND ARCHITECTURAL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS TO FORM COMPLETE INFORMATION REGARDING THIS SITE. IF A CONFLICT EXISTS BETWEEN THESE NOTES & DETAILS, THESE NOTES SHALL OVERRIDE THE DETAILS.
- LANDSCAPE CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES AND SPECIFICATIONS.
- ALL MATERIAL AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR, FROM DATE OF FINAL ACCEPTANCE. ALL PLANT MATERIAL WATERING & ESTABLISHMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- LANDSCAPE CONTRACTOR SHALL EXAMINE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND NOTIFY THE GENERAL CONTRACTOR IN WRITING OF UNSATISFACTORY CONDITIONS. DO NOT PROCEED UNTIL CONDITIONS HAVE BEEN CORRECTED.
- BEFORE COMMENCING WORK, LANDSCAPE CONTRACTOR SHALL CONTACT APPROPRIATE UTILITY COMPANIES FOR UTILITY LOCATIONS, AND COORDINATE WITH GENERAL CONTRACTOR IN REGARD TO LOCATION OF PROPOSED UTILITIES, CONDUITS, ETC.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SUBMITTALS, CUT SHEETS OF MATERIALS & SOIL TEST RESULTS DIRECTLY TO THE OWNERS REPRESENTATIVE FOR APPROVAL.
- THE CONTRACTOR SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT.
- REMOVE EXCESS SUB GRADE WHERE NECESSARY AND PLACE TOP SOIL A MINIMUM DEPTH OF SIX INCHES (6") IN TURF AND GRASS AREAS AND TWELVE (12") INCHES IN SHRUB BEDS. DISTRIBUTE STOCKPILED TOPSOIL AND PROVIDE ANY ADDITIONAL TOPSOIL NEEDED.
- ALL PLANT MATERIALS SHALL BE AS SPECIFIED AND MEET OR EXCEED SIZE IN SCHEDULES. OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REFUSE PLANT MATERIALS WHICH DO NOT MEET THE QUALITY REQUIRED FOR THE PROJECT.
- ALL SHADE TREES MUST NOT HAVE LIMBS THAT ARE LESS THAN 6' FROM THE ROOT CROWN. AFTER TWO YEARS OF GROWTH SHADE TREES SHALL HAVE THE LOWER LIMBS REMOVED SO THAT THERE WILL BE 8' OF CLEARANCE ABOVE ANY PAVED SURFACE. EACH TREE THAT IS LIMBED UP MUST HAVE LIMBS REMOVED ALL THE WAY AROUND THE TREE SO THAT IT IS EVENLY BALANCED.
- ALL TREE AND SHRUB BED LOCATIONS ARE TO BE STAKED OUT ON SITE FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- ALL CONVENTIONAL PLANTING BEDS AND MULCH AREAS ARE TO BE CONTAINED WITH STEEL EDGER AS SHOWN ON THE PLANS AND DEFINED IN THE DETAILS AND SPECIFICATIONS. EDGER IS NOT REQUIRED ADJACENT TO CURBS, WALKS, OR BUILDINGS.
- STEEL EDGER SHALL BE 4-INCH DEPTH, 1/8 INCH THICKNESS, INTERLOCKING STEEL EDGE, PAINTED GREEN WITH A ROUNDED NON CUT TOP, STAKED WITH METAL STAKES SUFFICIENTLY TO HOLD IN PLACE, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- CEDAR MULCH IS TO BE SPREAD FOUR (4) INCHES DEEP FOR ALL LANDSCAPE AREAS UNLESS NOTED OTHERWISE ON THE PLAN. ALL CONVENTIONAL PLANTING BEDS CONTAINED BY EDGER WILL BE UNIFORMLY MULCHED. APPLY PRE-EMERGENT HERBICIDE UNDER THE MULCH PER MANUFACTURER SPECIFICATIONS.

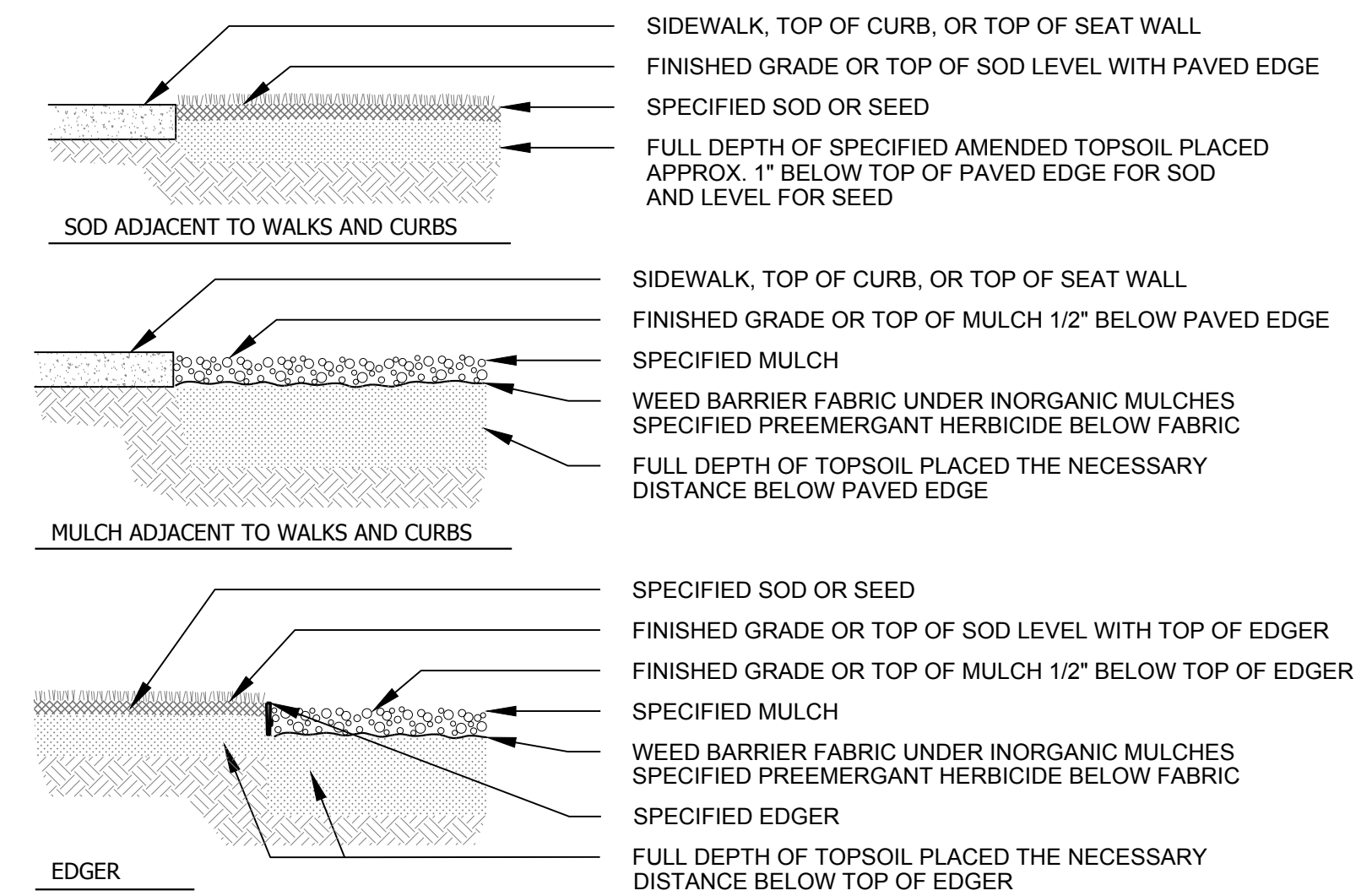
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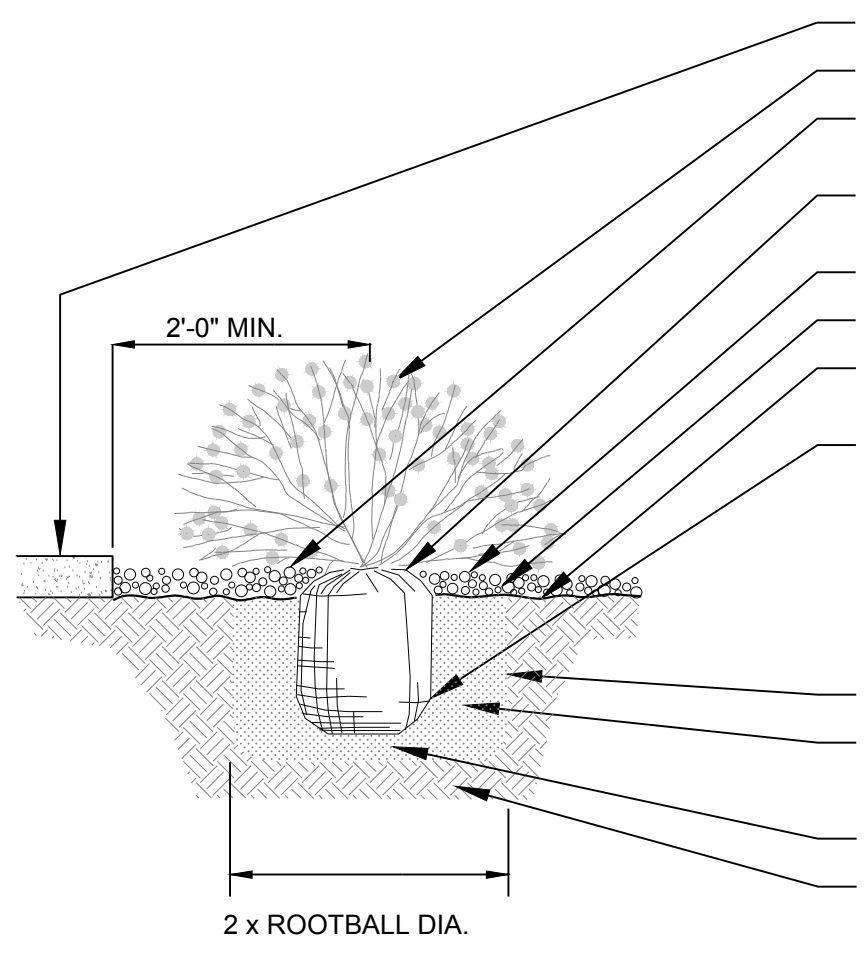
CONSTRUCTION DOCUMENTS

WAMEGO, KANSAS



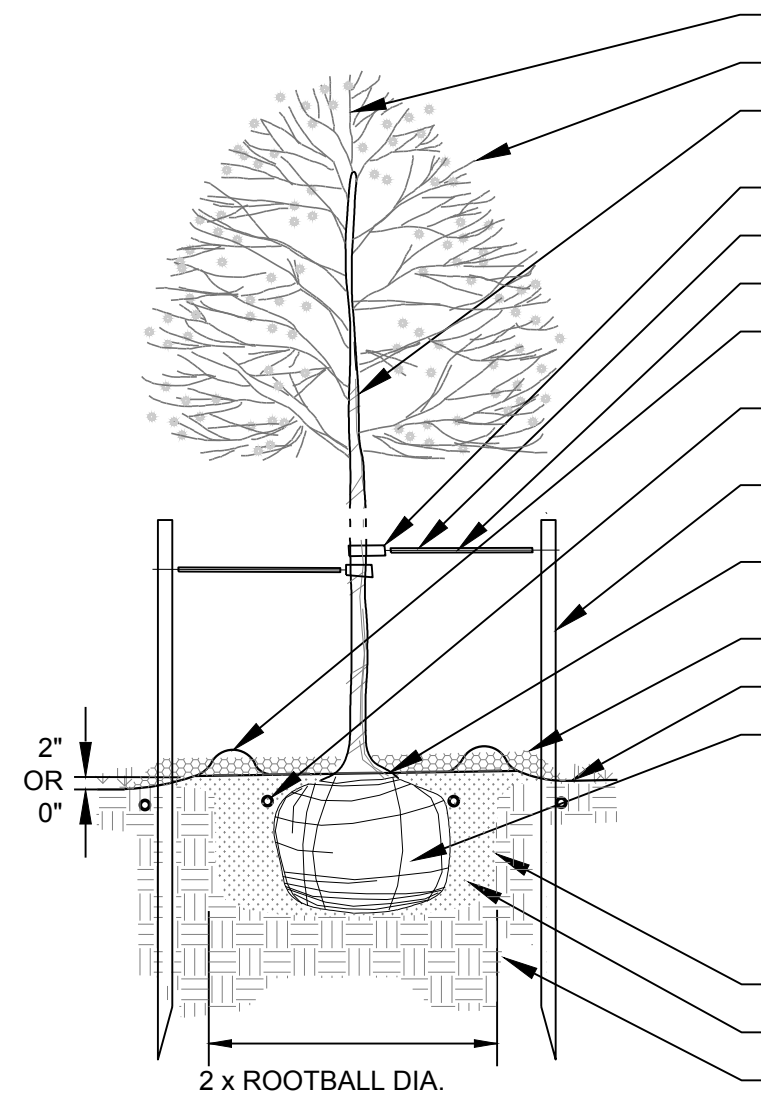
EDGE TREATMENT

NOT TO SCALE



SHRUB PLANTING

NOT TO SCALE



DECIDUOUS TREE PLANTING

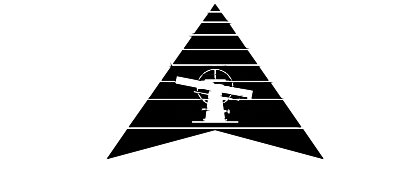
NOT TO SCALE

- SHADE TREES: LOWEST LIMBS MIN. 6'-8" FROM ROOT CROWN AFTER TWO YEARS NO LIMB SHALL BE WITHIN 8' OF PAVEMENT DO NOT CUT OR DAMAGE LEADER.
- PRUNE ALL DEAD OR DAMAGED WOOD PRIOR TO PLANTING.
- WRAP ENTIRE SURFACE OF TRUNK BELOW SECOND BRANCH WITH TREE WRAP AND SECURE.
- ATTACH GUY WIRE TO TRUNK WITH SPECIFIED TREE COLLAR. 1/2" DIA. WHITE PVC PIPE OVER WIRE, 24" LONG MIN.
- DOUBLE STRAND OF 12 GA. GALVANIZED STEEL WIRE TWISTED
- TEMPORARY 4" DEEP WATER RETENTION BASIN NOT NECESSARY WHEN TURF OR DRIP IRRIGATION IS OPERATING.
- DOUBLE SUBSURFACE DRIP IRRIGATION RINGS APPROX. 24" & 48" DIA.
- STEEL POST (2 MIN.) DRIVEN VERTICALLY TO EXTEN A MIN. OF 30" INTO UNDISTURBED SOIL
- SET ROOT CROWN LEVEL WITH TOP OF SOIL ADJACENT TO TREE & 2" ABOVE FINISHED GRADE IN SOD AREAS, FLUSH IN OTHER AREAS
- APPLY SPECIFIED MULCH TO REMAIN PERMANENTLY.
- FINISHED GRADE
- REMOVE ALL CONTAINMENT MATERIAL FROM THE TRUNK & SIDES OF ROOTBALL THAT IS NOT 100% HEMP.
- REMOVE BURLAP & TWINE FROM THE TOP 1/3 OF ROOTBALL.
- REMOVE FIBER OR PLASTIC POT AFTER PLACING IN THE PIT
- ROOTBALLS THAT ARE BROKEN APART AFTER CONTAINMENT IS REMOVED ARE DAMAGED AND SHALL BE REJECTED.
- HOLE SHOULD HAVE ROUGHENED SIDES
- SPECIFIED BACKFILL MIXTURE AND FERTILIZER APPLICATION UNDISTURBED SUBGRADE

REVISION DESCRIPTION
Changed Sheet Size to 24" x 36"

REVISION DATE
4-6-17

NORTH



SCALE: 1" = 20'

PROJECT #: 1702MN4004
CHECKED BY: KL
DRAWN BY: KMM

DATE: 4/3/2017

SHEET #

5

TOTAL SHEETS
7

LANDSCAPE PLAN

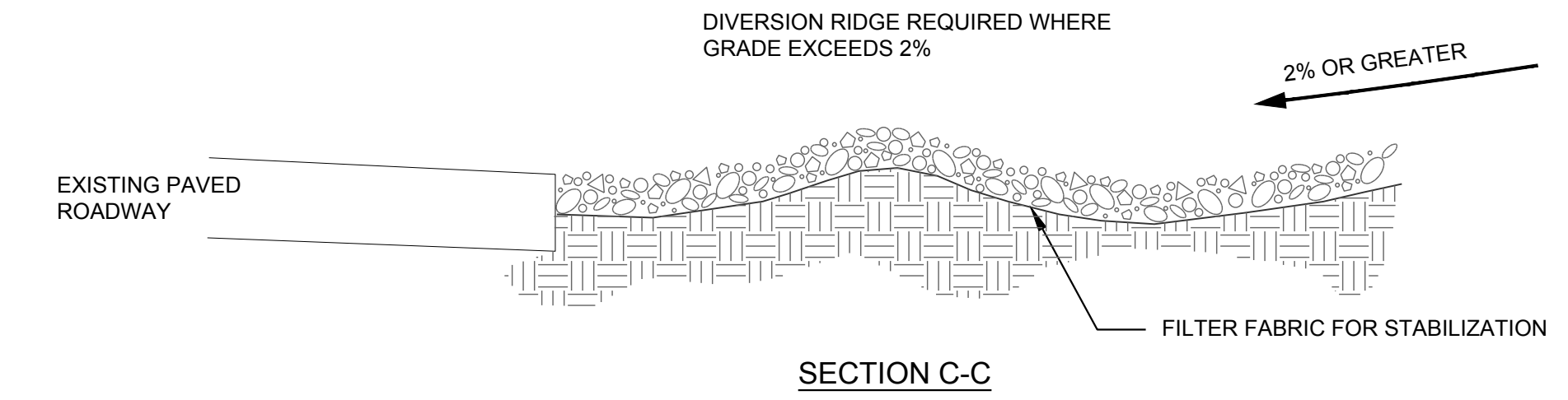
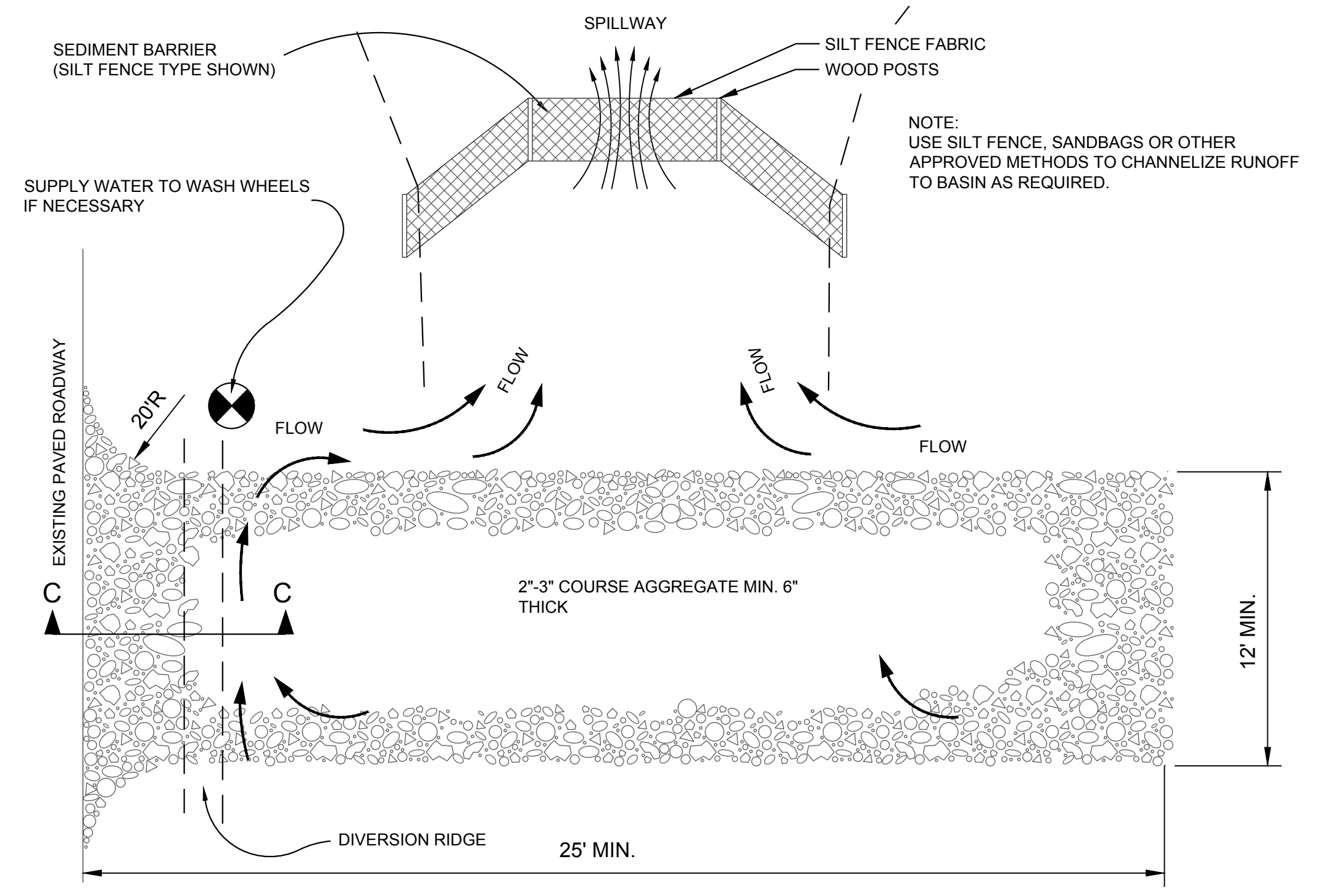


LEGEND

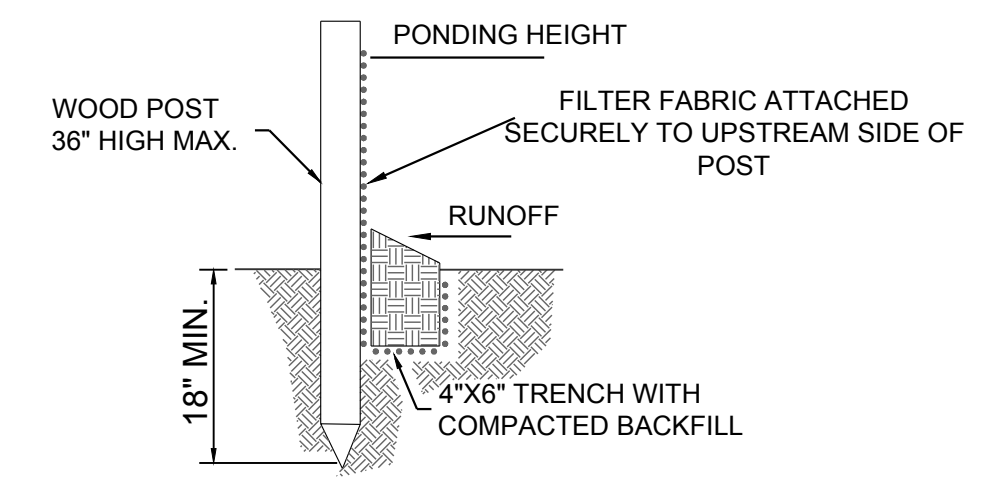
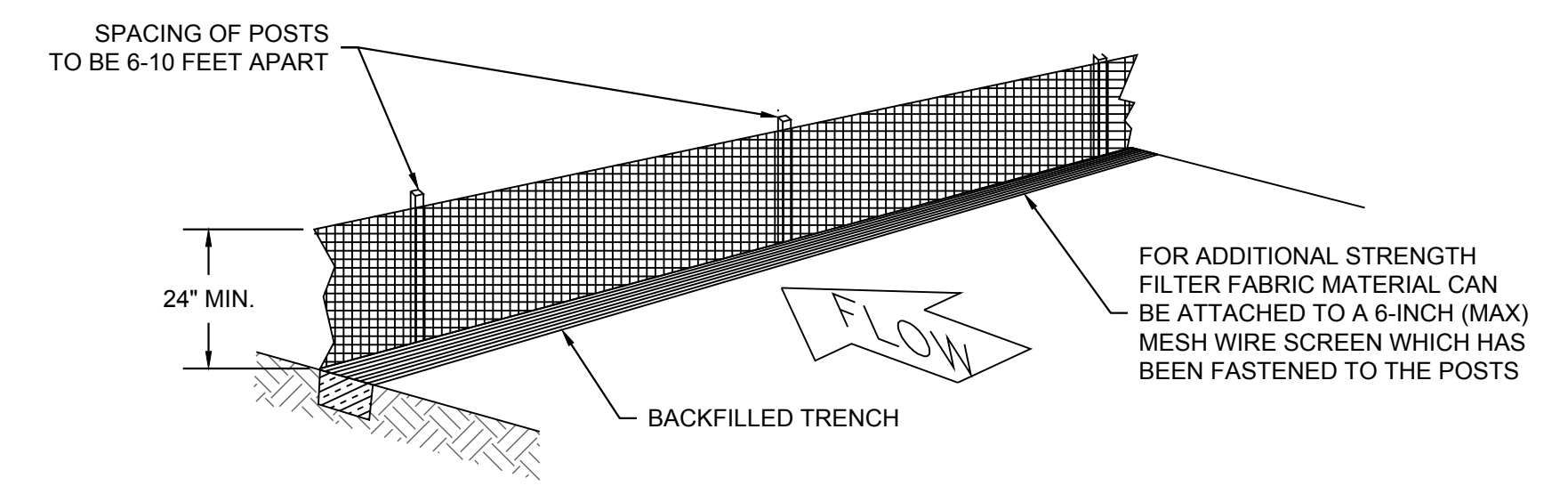
- SF SF SF SILT FENCE
- PERMANENT SEEDING

NOTES:
 CONTRACTOR TO COMPLY WITH CITY OF WAMEGO STORM WATER MANAGEMENT REQUIREMENTS.
 PERMANENT SEEDING SHALL INCLUDE ALL DISTURBED SOIL.
 CONTRACTOR SHALL DESIGNATE A TRUCK WASHOUT AREA.

SEEDING QUANTITIES:
 PERMANENT SEEDING: 0.2 AC



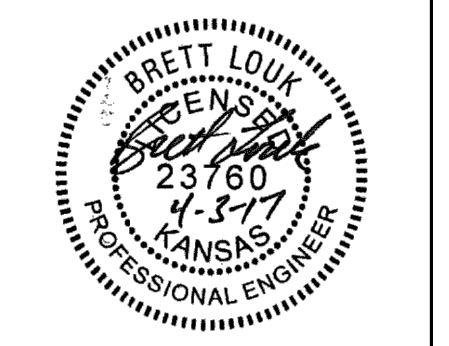
SECTION C-C
 STABILIZED CONSTRUCTION ENTRANCE
 NOT TO SCALE



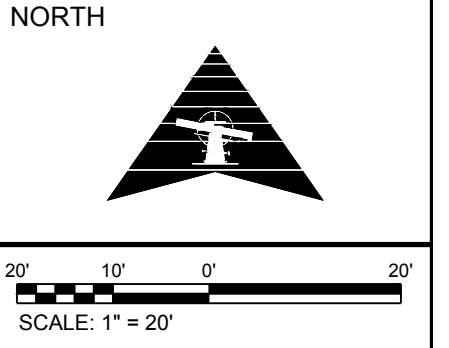
SILT FENCE BARRIERS
 NOT TO SCALE

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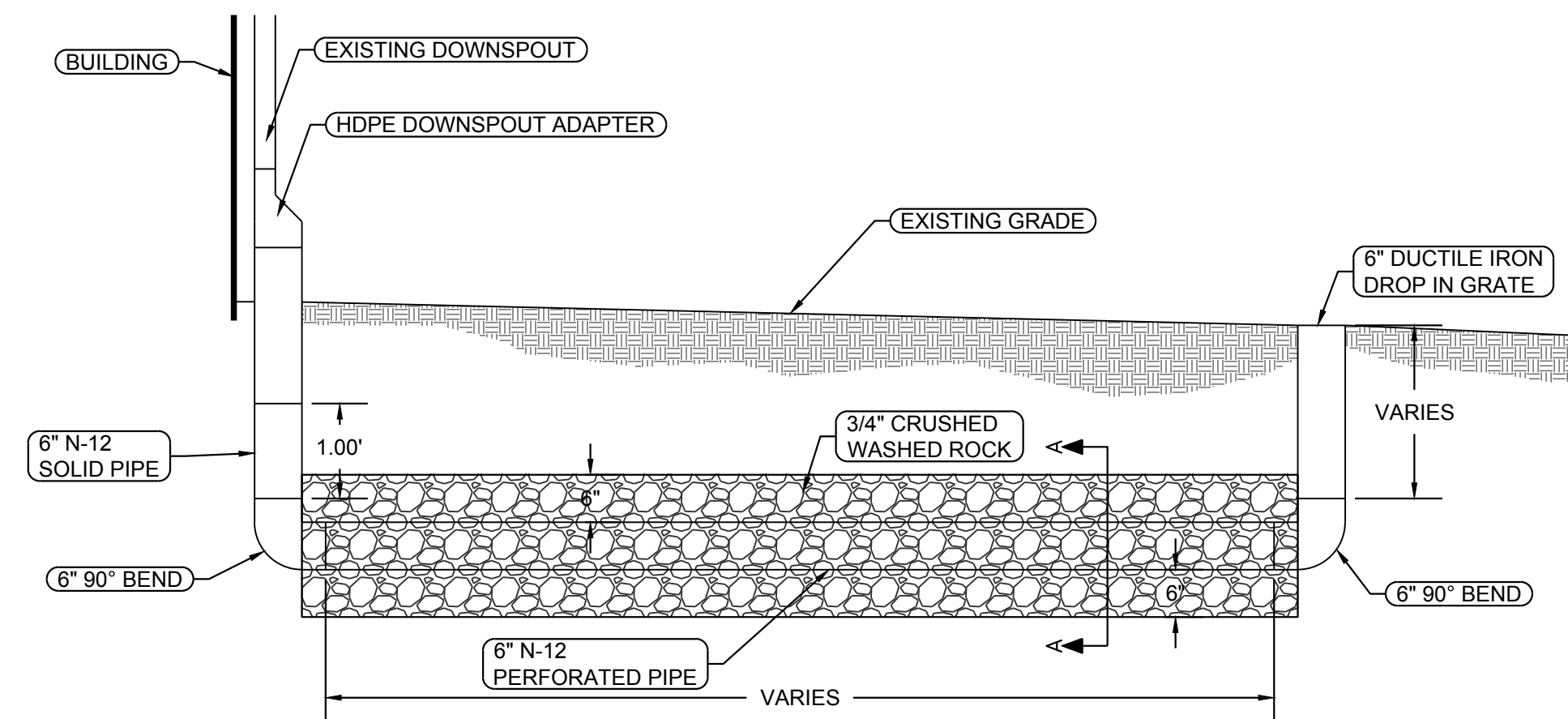
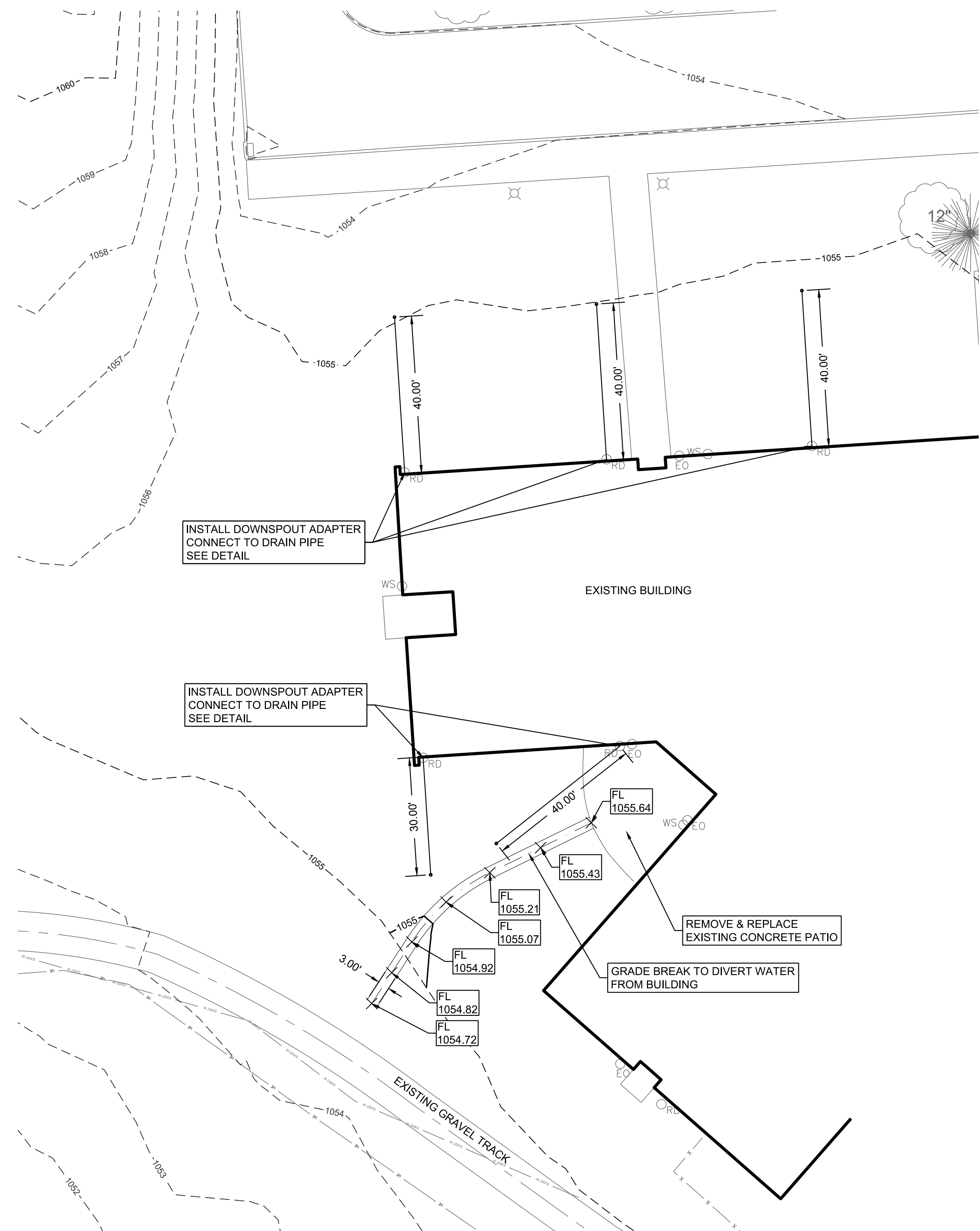
USD 320 - WAMEGO HIGH SCHOOL
 CONSTRUCTION DOCUMENTS
 WAMEGO, KANSAS



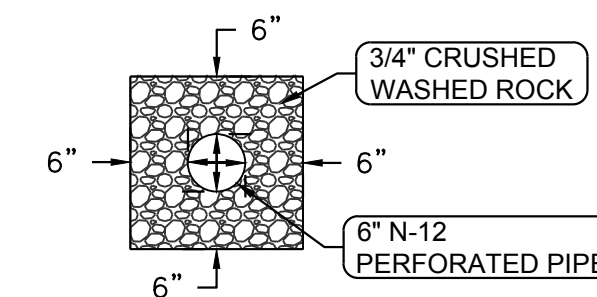
REVISION	DATE	DESCRIPTION
1	4-6-17	Changed Sheet Size to 24" x 36"



PROJECT #: 1702MN4004
 CHECKED BY: BML
 DRAWN BY: KMM
 DATE: 4/3/2017
 SHEET # **6**
 TOTAL SHEETS 7



TYPICAL DOWNSPOUT PROFILE DETAIL
NOT TO SCALE

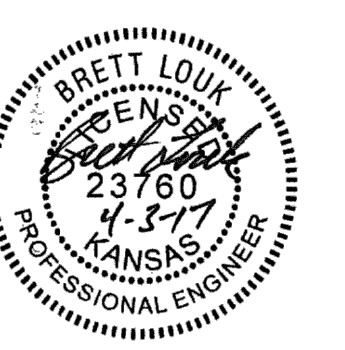


TYPICAL SECTION A-A DETAIL
NOT TO SCALE

USD 320 - WAMEGO MIDDLE SCHOOL

CONSTRUCTION DOCUMENTS

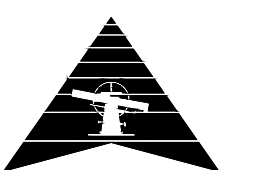
WAMEGO, KANSAS



REVISION DESCRIPTION
1 Changed Sheet Size to 24" x 36"

REVISION DATE
1 4-6-17

NORTH



SCALE: 1" = 20'

PROJECT #: 1702MN4004
CHECKED BY: BML
DRAWN BY: KMM

DATE:
4/3/2017

SHEET #

7

TOTAL SHEETS
7

DRAINAGE IMPROVEMENTS

SECTION 09 91 23 - INTERIOR PAINTING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following interior substrates:
1. Concrete.
 2. Concrete masonry units (CMUs).
 3. Steel and iron.
 4. Galvanized metal.
 5. Gypsum board.
 6. Wood surfaces.

1.3 DEFINITIONS

- A. Gloss Levels: The following gloss designations as determined in accordance with ASTM D 523 apply to paint products specified in this Section:
1. "Flat" refers to a lusterless or matte finish with a gloss range below 5 when measured at a 60-degree meter.
 2. "Eggshell" refers to low-sheen finish with a gloss range between 10 and 20 when measured at a 60-degree meter.
 3. "Satin" refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
 4. "Semi-Gloss" refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
 5. "Gloss" refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.
- B. Areas Subject to Moisture: These spaces are those that have permanent plumbing connections and appliances. These include, but are not limited to, toilet rooms, janitor's closets, locker rooms, shower rooms, training rooms, and laundries.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
1. Indicate VOC content.

- B. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.
1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 2. Apply coats on Samples in steps to show each coat required for system.
 3. Label each coat of each Sample.
 4. Label each Sample for location and application area.
- C. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.5 INFORMATIONAL SUBMITTALS

- A. Test results: Provide detailed records of results of each of the physical and visual tests used in determining the suitability of the existing painted surfaces for overcoating.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.7 QUALITY ASSURANCE

- A. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample of each type of coating and substrate required on the Project. Comply with procedures specified in Painting and Decorating Contractors of America (PDCA) P5. Duplicate finish of approved Samples.
1. Architect will select one room or surface to represent surfaces and conditions for each type of coating and substrate to be painted.
 - a. Wall Surfaces: Provide samples on at least 100 square feet (9 sq. m).
 - b. Small Areas and Items: Architect will designate an item or area required.
 2. After permanent lighting and other environmental services have been activated, apply coatings in this room or to each surface according to the Schedule or as specified. Provide required sheen, color, and texture on each surface.
 - a. After finishes are accepted, Architect will use the room or surface to evaluate coating systems of a similar nature.
 3. Final approval of colors will be from benchmark samples.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.9 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Benjamin Moore & Co.
 2. Dulux (formerly ICI Paints); a brand of AkzoNobel.
 3. PPG Architectural Coatings.
 4. Rust-Oleum Corporation; a subsidiary of RPM International, Inc.
 5. Sherwin-Williams Company (The).
 6. Tnemec, Inc.

2.2 PAINT, GENERAL

- A. Material Compatibility:
 1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
- B. VOC Content of Field-Applied Interior Paints and Coatings: Provide products that comply with the following limits for VOC content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24); these requirements do not apply to paints and coatings that are applied in a fabrication or finishing shop:
 1. Flat Paints and Coatings: VOC content of not more than 50 g/L.
 2. Nonflat Paints, Coatings, and Primers: VOC content of not more than 175 g/L.
 3. Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
- C. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicat-

ed. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

2.3 PAINT COLORS

- A. Basis-of-Design Colors: The design is based on the colors indicated by manufacturer's designations in the Finish Schedule Legend. Subject to compliance with requirements, provide exact duplicates of the named colors.
- B. Colors: Match Architect's samples.

2.4 PAINT MATERIALS

- A. Basis-of-Design Products: The design for each type of paint is based on the products named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.
- B. Primers:
 1. Water-Based Epoxy Block Filler: Tnemec Series 1254, Epoxoblock WB, Color 1202 Off-White.
 2. Waterborne Modified Polyamine Epoxy Primer: Tnemec Series 151-1051 "Elasto-Gtip FC."
 3. Rust Inhibiting Primer for Non-Galvanized Ferrous Metal: Tnemec Series 135 "Chem-build."
 4. Wood Primer: Tnemec Series V10 "Tnemec Primers," Color 1009 Gray.
 5. Latex Based Interior Primer: Sherwin-Williams ProMar 200, "Interior Latex Primer, B28W02600."
- C. Interior Finish Coat Material:
 1. Semi-Gloss Acrylic Polymer: Tnemec Series 1029 "Enduratone."
 2. Satin Waterborne Acrylic Epoxy Finish: Tnemec, Series 113 H.B. Tneme-Tufcoat.
 3. Latex-based Interior Semi-Gloss: Sherwin Williams "ProMar 200 Zero Interior Latex, Series B31-2600."
 4. Latex-based Interior Eggshell: Sherwin Williams "ProMar 200 Zero Interior Latex, Series B20-2600."

2.5 SOURCE QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
 1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If

- paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
 3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 1. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
 2. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 3. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- B. Testing of existing masonry surfaces: Applicator shall evaluate the existing paint systems to determine if surfaces are acceptable for overcoating. Issues to be addressed included, but are not limited to, total film thickness, number of coats, quality of adhesion to the substrate and between coats, and defects in the film.
 1. Perform the following physical tests at a minimum of 3 locations for the corridors and 3 locations in toilet rooms:
 - a. Measure total dry film thickness and number of coats with a Tooke gauge.
 - b. Visually inspect the film for defects such as delamination, cracking and blistering.
 - c. Check adhesion at the same locations where dry film thickness readings were taken, using the following adhesion test methods:
 - 1) "X" Scribe and Tape Test - Conduct this test in accordance with ASTM D 3359 Standard Test Methods for Measuring Adhesion by Tape Test, Method A.
 - 2) Knife Adhesion – Probe at the coating with the point of a knife blade in an attempt to delaminate the coating system between coats or from the substrate.
 2. Document the results of each test.
- C. Test Patches: Before application of coatings, apply test patches as directed by the Architect to determine adhesion of the new coating system to the existing substrates. Use ASTM D 5064

Standard Practice for Conducting a Patch Test to Assess Coating Compatibility, as a guide in conducting these test patches.

- D. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
1. Concrete: 12 percent.
 2. Fiber-Cement Board: 12 percent.
 3. Masonry: 12 percent.
 4. Wood: 15 percent.
 5. Gypsum Board: 12 percent.
- E. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
 2. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- D. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
1. Provide barrier coats over incompatible primers or remove and reprime.
 2. Cementitious Materials: Prepare concrete and concrete masonry surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 - a. Use power-tool methods, including circular grinding sanding, if recommended by paint manufacturer.
 - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's written instructions.

3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including cabinets, counters, cases, and paneling.
 - c. If transparent finish is required, backprime with spar varnish.
 - d. Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on back side.
 - e. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
 4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with surface preparation specifications prepared by The Society for Protective Coatings (SSPC).
 - a. Abrasive blast clean steel surfaces as recommended by paint system manufacturer and according to requirements of SSPC-SP 6, Commercial Blast Cleaning.
 - b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
 - c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with the same primer as the shop coat.
 5. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
 6. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- E. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain paint before using.
 3. Use only thinners approved by paint manufacturer and only within recommended limits.

3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 2. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 3. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 5. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
 6. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brush Application: Use brushes best suited for material applied and of appropriate size for the surface or item being coated.
 - a. Apply primers and first coats by brush unless manufacturer's written instructions permit using roller or mechanical applicators.
 - b. Brush out and work brush coats into surfaces in an even film.
 - c. Eliminate cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Neatly draw glass lines and color breaks.
 2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by manufacturer for the material and texture required.
 3. Spray Equipment: Use mechanical methods to apply coating if permitted by manufacturer's written instructions and governing regulations.
 - a. Use airless or air-assisted spray equipment with orifice size recommended by manufacturer for material and texture required.
 - b. Apply each coat to provide the equivalent hiding of brush-applied coats.
 - c. Do not double back with spray equipment building-up film thickness of two coats in one pass, unless recommended by manufacturer.
- C. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer. Finish coats shall be provided in the dry film thickness specified in the schedules located at the end of this Section.
- D. Block Fillers: Apply block fillers to concrete masonry and cast-in-place concrete at a rate to ensure complete coverage with all pores filled.
- E. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to substrates that are required to be painted or finished and that have not been prime coated by others.

1. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.
- F. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
1. Apply additional coats as required to provide a completely opaque and uniform finish surface.
 2. Deep and accent clear-base colors may require 1-2 more coats to achieve the proper hide
- G. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- H. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
1. Contractor shall touch up and restore painted surfaces damaged by testing.
 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.
1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in Painting and Decorating Contractors of America (PDCA) Specification P1.

3.6 INTERIOR PAINT SCHEDULE

- A. General: Provide the designated paint systems for the various substrates, as indicated in the Room Finish Schedule.
- B. Concrete Masonry Units in Corridors:
 - 1. Semi-Gloss Acrylic Polymer: Three coats
 - a. Block Filler: Block Filler, for uncoated surfaces only.
 - b. First Coat: Semi-Gloss Acrylic Polymer (4-6 mils)
 - c. Second Coat: Semi-Gloss Acrylic Polymer (4-6 mils)
- C. Concrete Masonry Units in Areas Subject to Moisture:
 - 1. Gloss Epoxy Coating:
 - a. Primer: Modified Polyamine Epoxy Primer (0.7-1.5 mils).
 - b. First Coat: Satin Waterborne Acrylic Epoxy Finish (4-6 mils)
 - c. Second Coat: Satin Waterborne Acrylic Epoxy Finish (4-6 mils)
- D. Gypsum Board Walls and Partitions (Not Subject to Moisture and Food Preparation):
 - 1. Eggshell Enamel Finish: Three coats
 - a. Primer: Latex-based Interior Primer
 - b. First Coat: Latex-based Interior Eggshell (1.7 mils)
 - c. Second Coat: Latex-based Interior Eggshell (1.7 mils)
- E. Non-Galvanized Ferrous Metal:
 - 1. Acrylic: Three coats
 - a. Primer: Rust Inhibiting Primer (Primer is not required on shop primed items. Shop primer may require field touchup.)
 - b. First Coat: Semi-Gloss Acrylic Polymer (4-6 mils)
 - c. Second Coat: Semi-Gloss Acrylic Polymer (4-6 mils)
- F. Painted Woodwork: Provide the following painted finishes for new interior woodwork
 - 1. Acrylic: Three coats
 - a. Primer: Wood Primer (2-3 mils)
 - b. First Coat: Semi-Gloss Acrylic Polymer (4-6 mils)
 - c. Second Coat: Semi-Gloss Acrylic Polymer (4-6 mils)

END OF SECTION 09 91 23