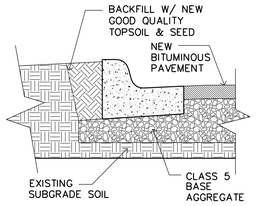
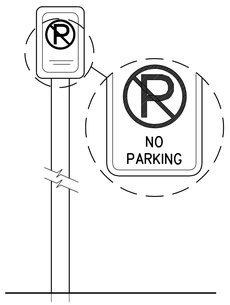
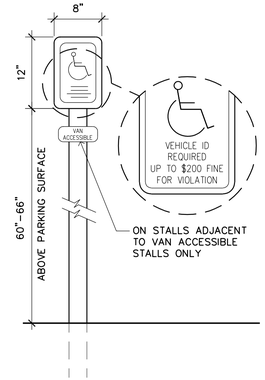


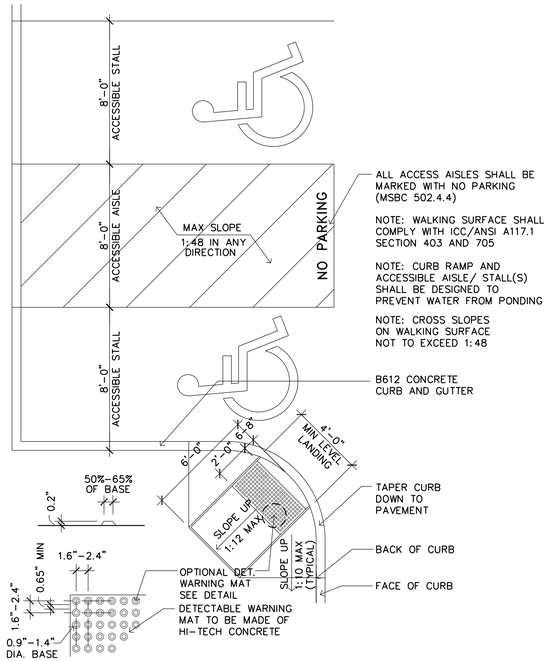
7 / A1 B6-12 CONCRETE CURB
SCALE: 1/2" = 1'-0"



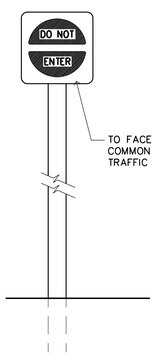
6 / A1 NO PARKING SIGN
SCALE: 1" = 1'-0"



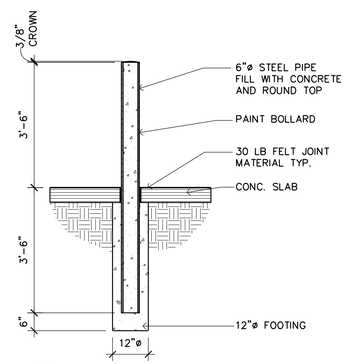
5 / A1 ACCESSIBLE PARKING SIGN
1" = 1'-0"



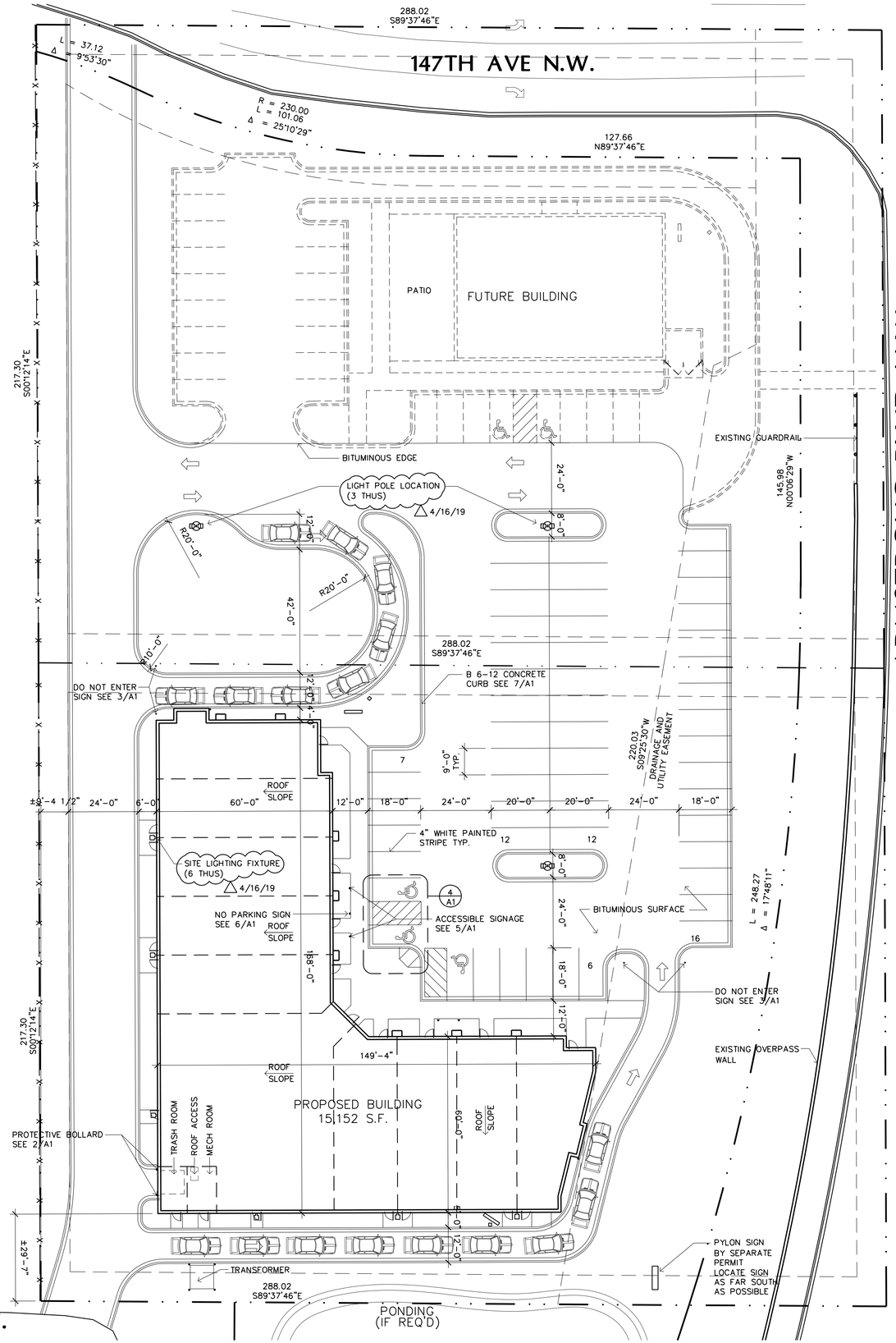
4 / A1 ACCESSIBLE CURB CUT DETAIL
SCALE: 1/4" = 1'-0"



3 / A1 DO NOT ENTER SIGN
1" = 1'-0"



2 / A1 CONCRETE BOLLARD
SCALE: 1/2" = 1'-0"



1 / A1 SITE PLAN
SCALE: 1" = 20'-0"

NORTH

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ARMSTRONG RETAIL
Ramsey, Minnesota

Project Designer: JAMES B
Drawn By: JRB
Checked By: LL
Revisions

3/20/19	PRELIMINARY
3/25/19	PROGRESS SET 50%
4/3/19	ISSUE FOR PERMIT

SITE PLAN DETAILS

Sheet Number

A1

Project No. 190205-2

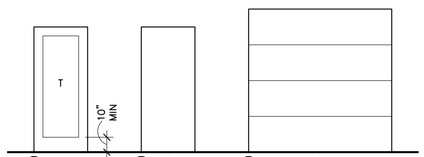
Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-A1

[1] 1 HOUR 3-5/8" METAL STUD WALL

One Layer 5/8" Type 'X' Gypsum Wallboard Or Gypsum Veneer Base Applied At Right Angles Or Parallel To Each Side Of 3-5/8" Steel Studs 24" o.c. With 1" Type S Drywall Screws 8" o.c. To Vertical Joints And 12" o.c. At Wall Perimeter And Intermediate Studs. Face Layer 5/8" Type 'X' Gypsum Wallboard Or Gypsum Veneer Base Applied Parallel Or At Right Angles to ONE SIDE With 1 5/8" Type S Drywall Screws 12" o.c.
Joints Staggered 24" Each Layer And Side. Sound Tested With 3 1/2" Glass Fiber Friction Fit In Stud Space

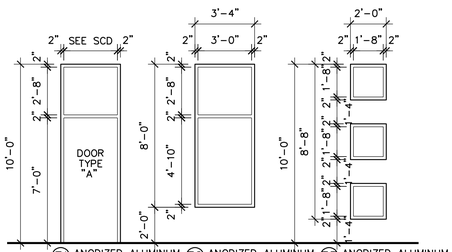
GA FILE NO. WP 1052 STC RATING = 50-54

4 / A2 WALL TYPES
SCALE: 1" = 1'-0"

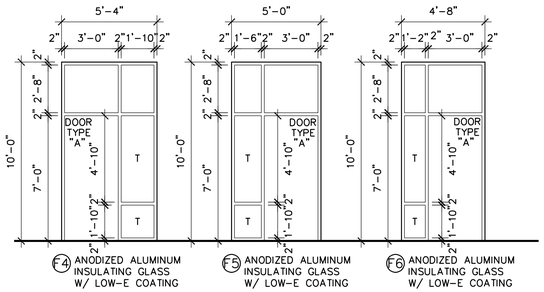


(A) ANODIZED ALUMINUM INSULATING GLASS
(B) PTD. HOLLOW METAL
(C) UPWARD ACTING OVERHEAD DOOR

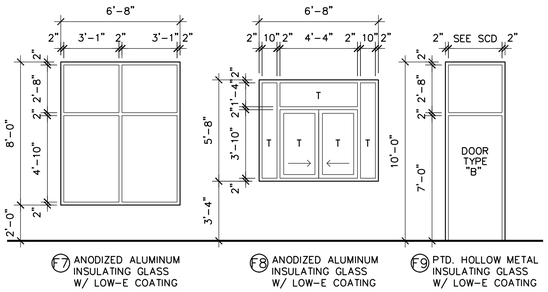
3 / A2 DOOR TYPES
SCALE: 1/4" = 1'-0" T = TEMPERED GLASS



(F1) ANODIZED ALUMINUM INSULATING GLASS W/ LOW-E COATING
(F2) ANODIZED ALUMINUM INSULATING GLASS W/ LOW-E COATING
(F3) ANODIZED ALUMINUM INSULATING GLASS W/ LOW-E COATING



(F4) ANODIZED ALUMINUM INSULATING GLASS W/ LOW-E COATING
(F5) ANODIZED ALUMINUM INSULATING GLASS W/ LOW-E COATING
(F6) ANODIZED ALUMINUM INSULATING GLASS W/ LOW-E COATING



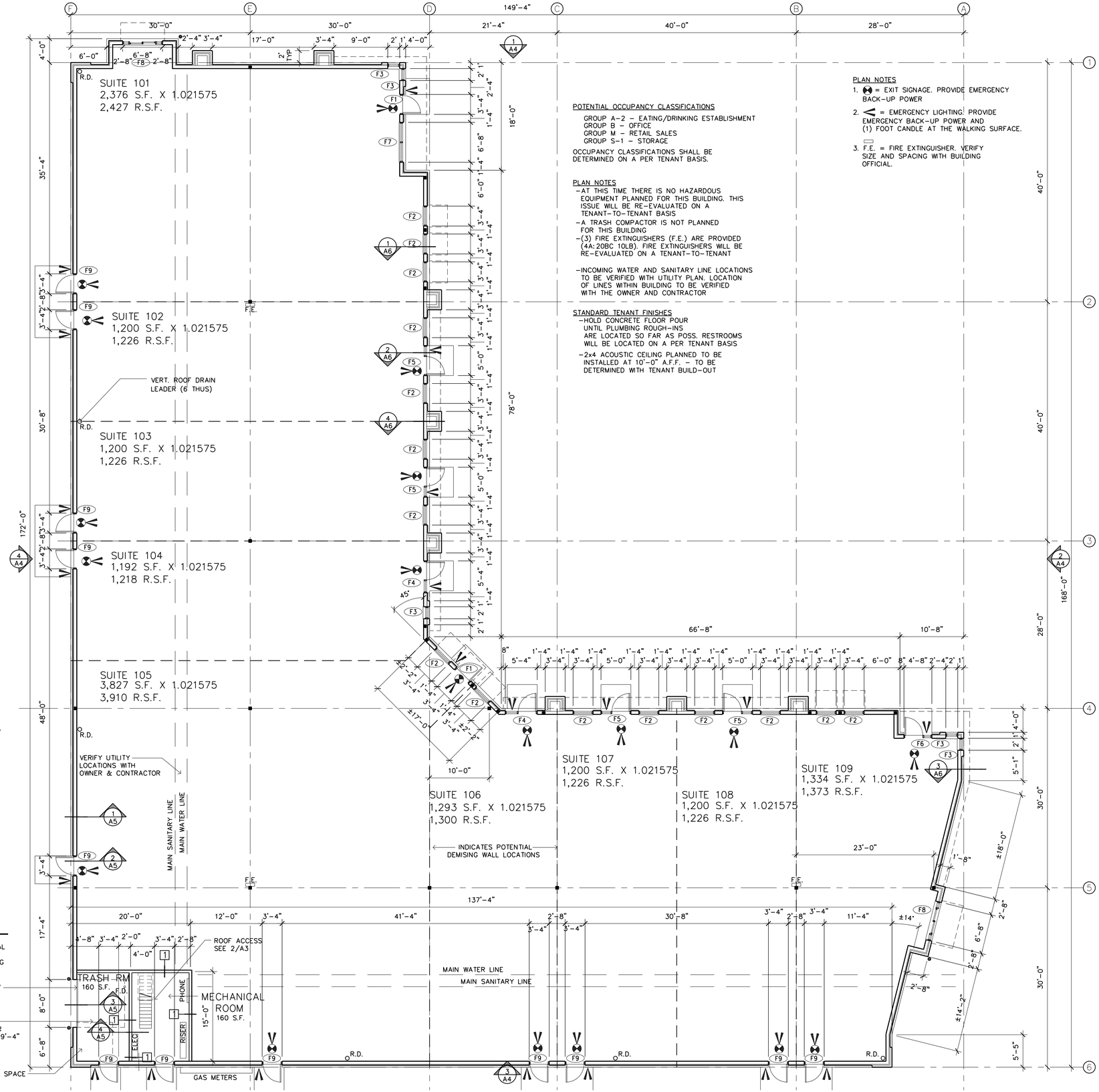
(F7) ANODIZED ALUMINUM INSULATING GLASS W/ LOW-E COATING
(F8) ANODIZED ALUMINUM INSULATING GLASS W/ LOW-E COATING
(F9) PTD. HOLLOW METAL INSULATING GLASS W/ LOW-E COATING

2 / A2 FRAME TYPES
SCALE: 1/4" = 1'-0" T = TEMPERED GLASS

NORTH

1 / A2 FLOOR PLAN
SCALE: 1/8" = 1'-0"

15,152 S.F. COMMON AREA FACTOR 15,152/ 14,832 = 1.021575



POTENTIAL OCCUPANCY CLASSIFICATIONS

GROUP A-2 - EATING/DRINKING ESTABLISHMENT
GROUP B - OFFICE
GROUP M - RETAIL SALES
GROUP S-1 - STORAGE

OCCUPANCY CLASSIFICATIONS SHALL BE DETERMINED ON A PER TENANT BASIS.

PLAN NOTES
-AT THIS TIME THERE IS NO HAZARDOUS EQUIPMENT PLANNED FOR THIS BUILDING. THIS ISSUE WILL BE RE-EVALUATED ON A TENANT-TO-TENANT BASIS
-A TRASH COMPACTOR IS NOT PLANNED FOR THIS BUILDING
-(3) FIRE EXTINGUISHERS (F.E.) ARE PROVIDED (4A:20BC 10LB). FIRE EXTINGUISHERS WILL BE RE-EVALUATED ON A TENANT-TO-TENANT

-INCOMING WATER AND SANITARY LINE LOCATIONS TO BE VERIFIED WITH UTILITY PLAN. LOCATION OF LINES WITHIN BUILDING TO BE VERIFIED WITH THE OWNER AND CONTRACTOR

STANDARD TENANT FINISHES
-HOLD CONCRETE FLOOR POUR UNTIL PLUMBING ROUGH-INS ARE LOCATED SO FAR AS POSS. RESTROOMS WILL BE LOCATED ON A PER TENANT BASIS
-2x4 ACOUSTIC CEILING PLANNED TO BE INSTALLED AT 10'-0" A.F.F. - TO BE DETERMINED WITH TENANT BUILD-OUT

PLAN NOTES
1. ⊕ = EXIT SIGNAGE. PROVIDE EMERGENCY BACK-UP POWER
2. ⋖ = EMERGENCY LIGHTING. PROVIDE EMERGENCY BACK-UP POWER AND (1) FOOT CANDLE AT THE WALKING SURFACE.
3. F.E. = FIRE EXTINGUISHER. VERIFY SIZE AND SPACING WITH BUILDING OFFICIAL.

Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-A2

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ARMSTRONG RETAIL
Ramsey, Minnesota

Project Designer: JAMES B
Drawn By: JRB
Checked By: LL

Revisions

2/19/19	PRELIMINARY
3/25/19	PROGRESS SET 50%
4/3/19	ISSUE FOR PERMIT

FLOOR PLAN COMPONENT TYPES

Sheet Number

A2

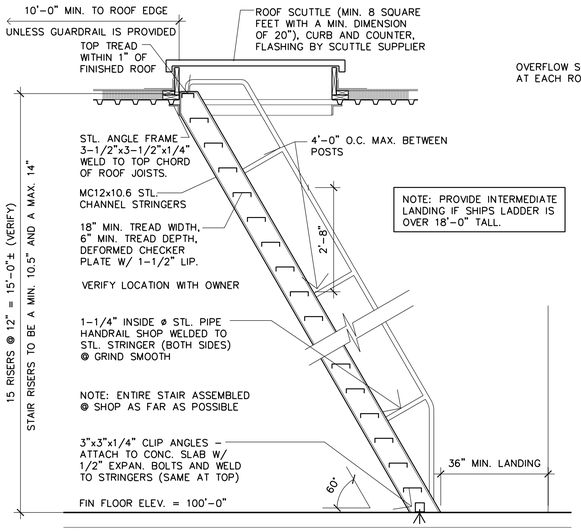
Project No. 190205-2

PLAN NOTES:

1. ROOF SLOPES 8" OVER 58'-0" (1.1%)
2. ROOF TOP UNIT LOCATIONS MUST BE CONFIRMED WITH MECHANICAL DRAWINGS (DESIGN BUILD) ROOF TOP UNITS TO BE LOCATED AWAY FROM THE PARAPET EDGE SO FAR AS POSSIBLE TO MINIMIZE THEIR APPEARANCE FROM THE GROUND.
3. ROOF DRAIN AND DRAIN LEADER DESIGN IS BY PLUMBING CONTRACTOR LEADERS TO BE TIED INTO ONSITE STORM DRAIN – SEE CIVIL PLAN FOR STUB LOCATION

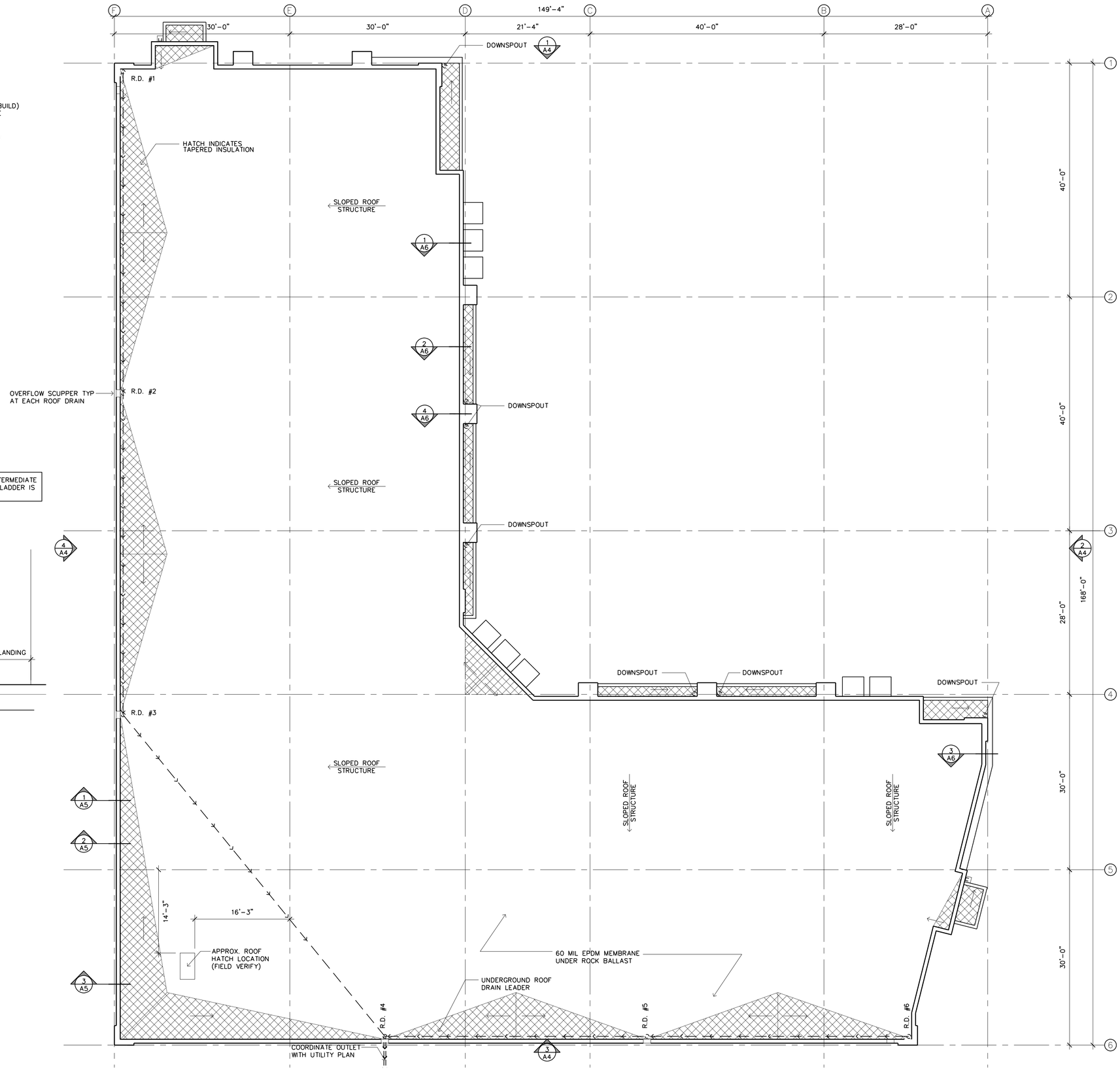
AREA SERVED BY ROOF DRAIN

ROOF DRAIN #1 ± 1,592 S.F.	ROOF DRAIN #4 ± 2,282 S.F.
ROOF DRAIN #2 ± 3,190 S.F.	ROOF DRAIN #5 ± 2,598 S.F.
ROOF DRAIN #3 ± 3,172 S.F.	ROOF DRAIN #6 ± 1,693 S.F.



NOTE: PROVIDE INTERMEDIATE LANDING IF SHIPS LADDER IS OVER 18'-0" TALL.

2 A3 SHIPS LADDER DETAIL
SCALE: 1/2" = 1'-0"



NORTH

1 A3 ROOF PLAN
SCALE: 1/8" = 1'-0"

Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-A3

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Revisions

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4/3/19	ISSUE FOR PERMIT

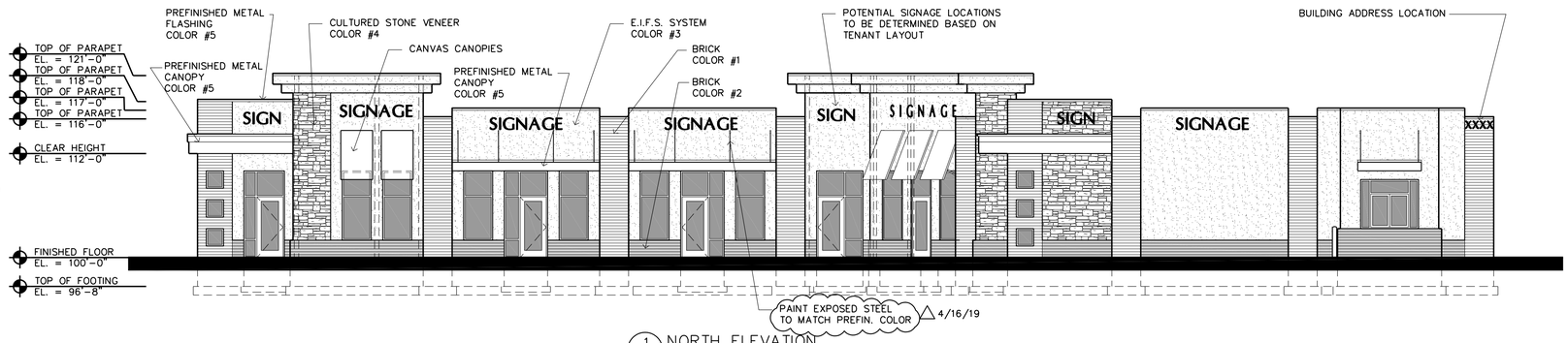
ROOF PLAN
SCUPPER DETAIL
SHIPS LADDER DETAIL

Sheet Number

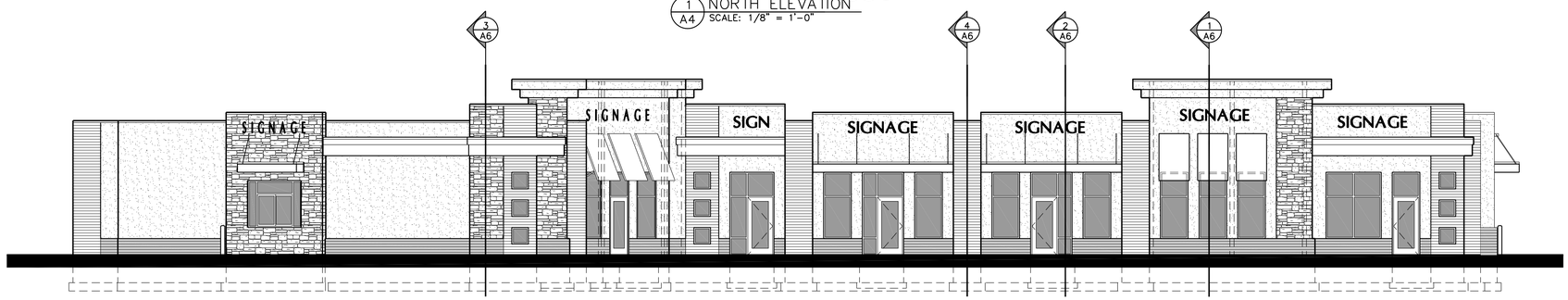
A3

Project No. 190205-2

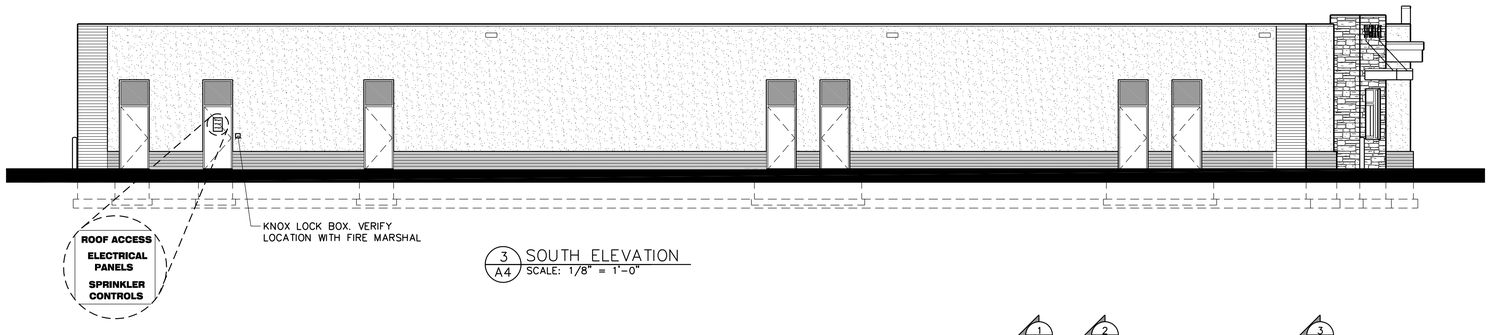
COLOR KEY
COLOR #1
INTERSTATE BRICK – TERRA COTTA OR EQUAL
COLOR #2
INTERSTATE BRICK – MIDNIGHT BLACK OR EQUAL
COLOR #3
SENERGY – SADDLESOAP, #3097 SAHARA FINISH (OR EQUAL)
COLOR #4
CORONADO – EASTERN MOUNTAIN LEDGE GREY QUARTZITE (OR EQUAL)
COLOR #5
FIRESTONE – MATTE BLACK OR EQUAL
STOREFRONT FRAMES
DARK BRONZE
CANVAS CANOPIES
BLACK
△ 4/16/19



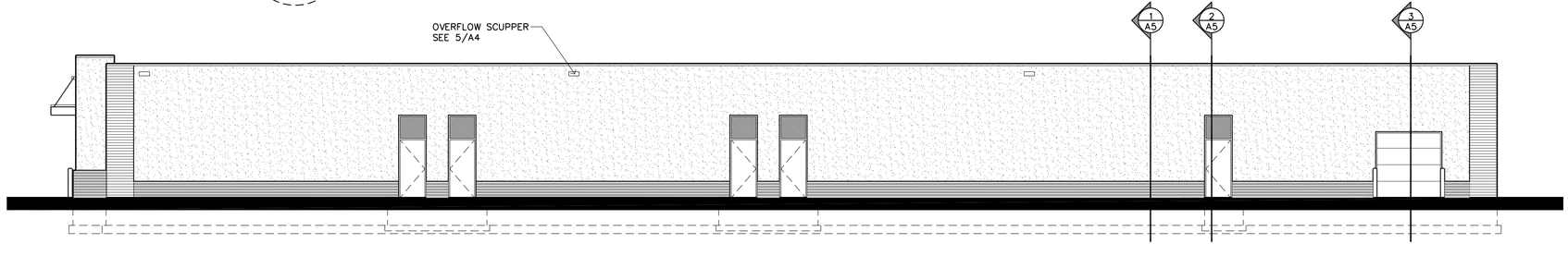
1 A4 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



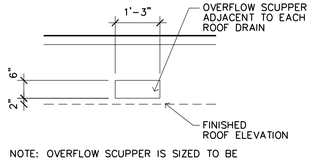
2 A4 EAST ELEVATION
SCALE: 1/8" = 1'-0"



3 A4 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



4 A4 WEST ELEVATION
SCALE: 1/8" = 1'-0"



NOTE: OVERFLOW SCUPPER IS SIZED TO BE 3X THE AREA OF THE MAXIMUM VERTICAL LEADER SIZE ASSUMED TO BE 6" DIAMETER. VERIFY WITH THE PLUMBING DESIGNER AND INT'L PLUMBING CODE

5 A4 OVERFLOW SCUPPER DETAIL
SCALE: 1/2" = 1'-0"

Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-A4

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4/3/19
DATE

ARMSTRONG RETAIL
Ramsey, Minnesota

Project Designer: JAMES B
Drawn By: JRB
Checked By: LL
Revisions

2/19/19	PRELIMINARY
3/25/19	PROGRESS SET 50%
4/3/19	ISSUE FOR PERMIT

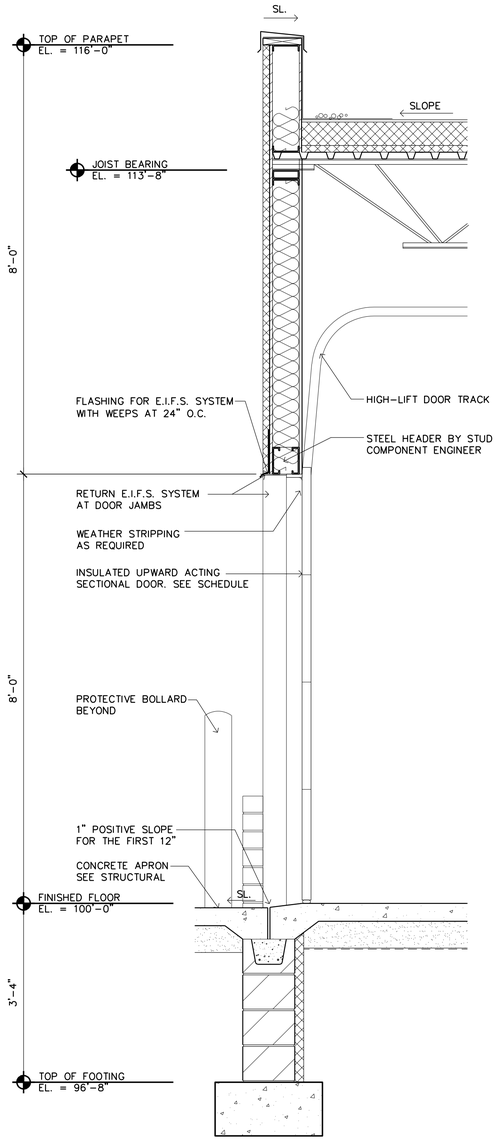
BUILDING ELEVATIONS SCUPPER DETAIL

Sheet Number

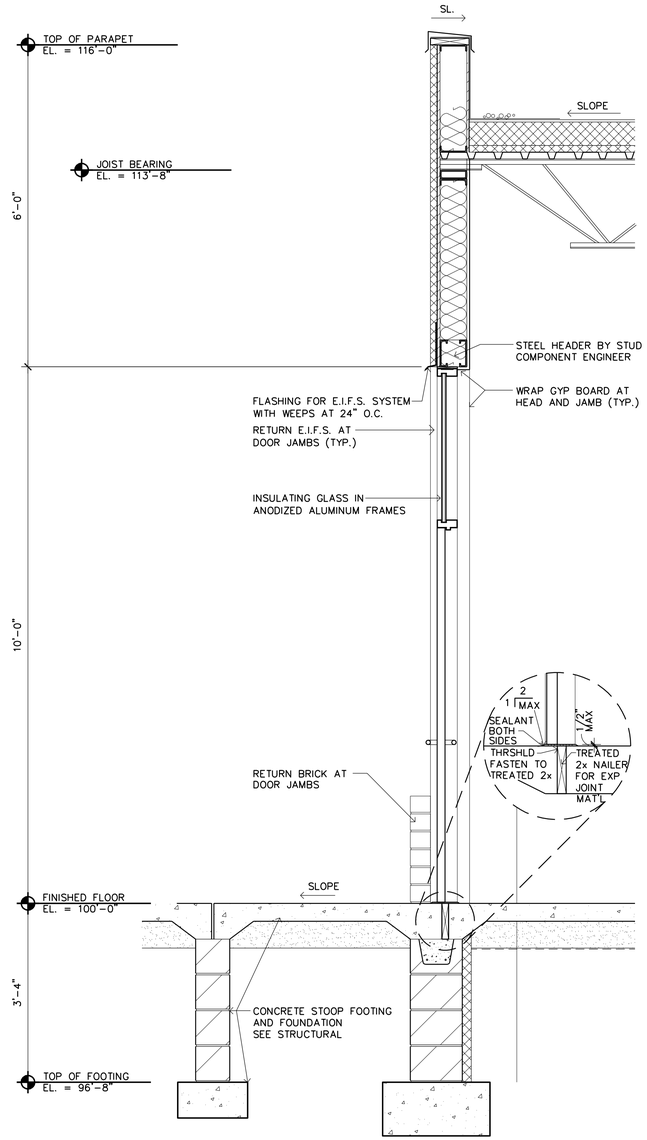
A4

Project No. 190205-2

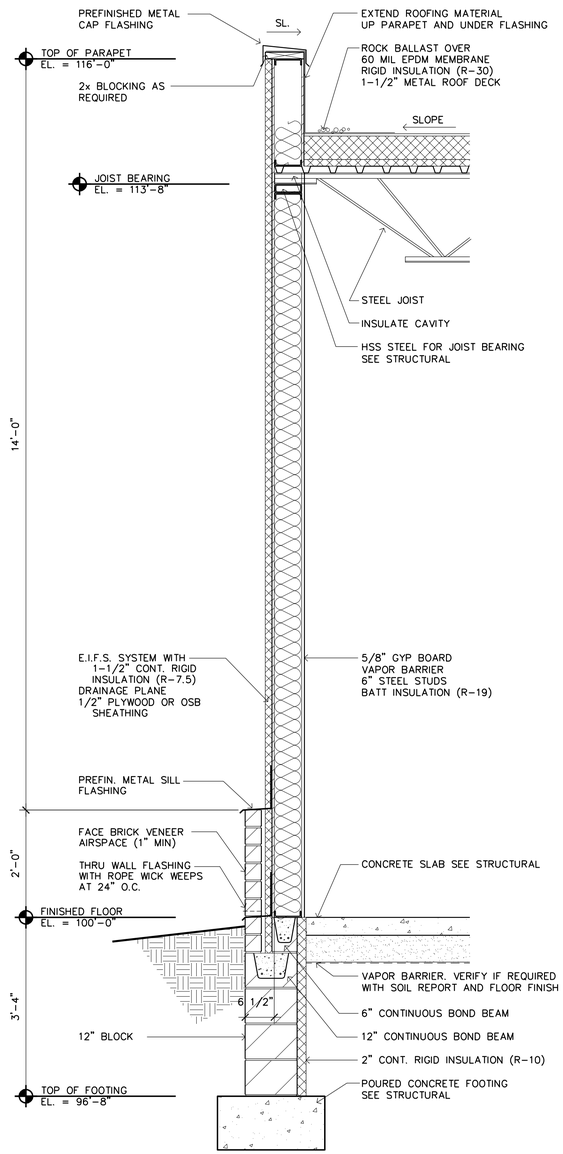
4 / A5 WALL SECTION AT STEP IN SLAB
SCALE: 3/4" = 1'-0"



3 / A5 WALL SECTION AT O.H. DOOR
SCALE: 3/4" = 1'-0"



2 / A5 WALL SECTION AT DOOR
SCALE: 3/4" = 1'-0"



1 / A5 TYPICAL WALL SECTION
SCALE: 3/4" = 1'-0"

Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-A5

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Revisions

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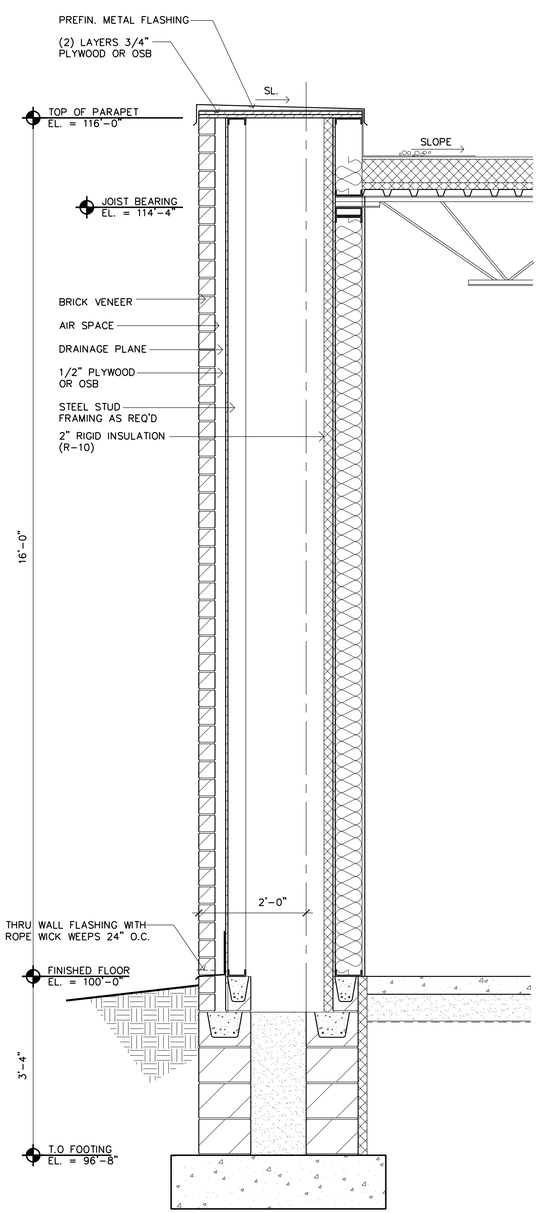
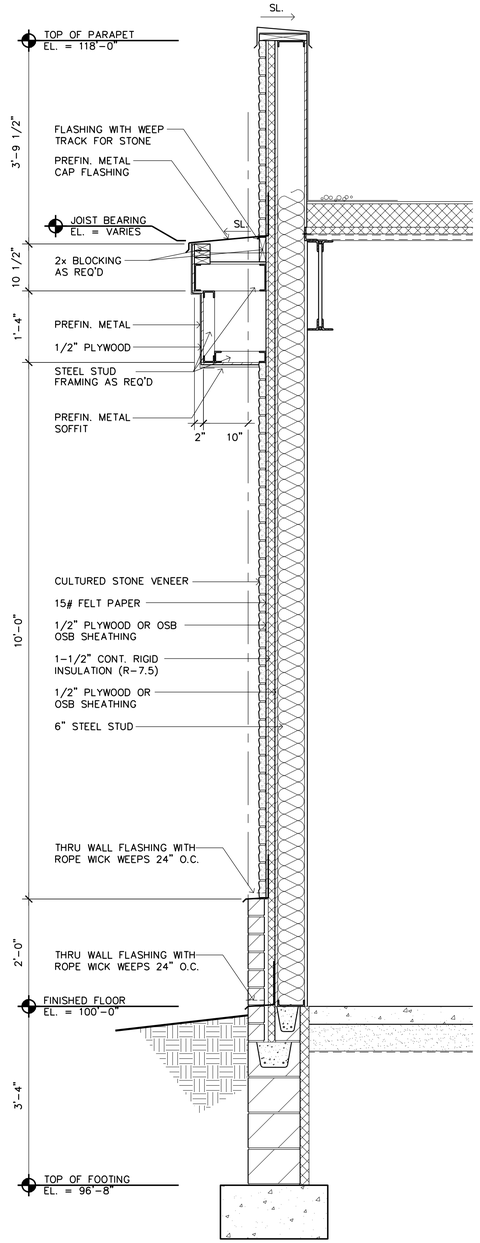
WALL SECTIONS

Sheet Number
A5

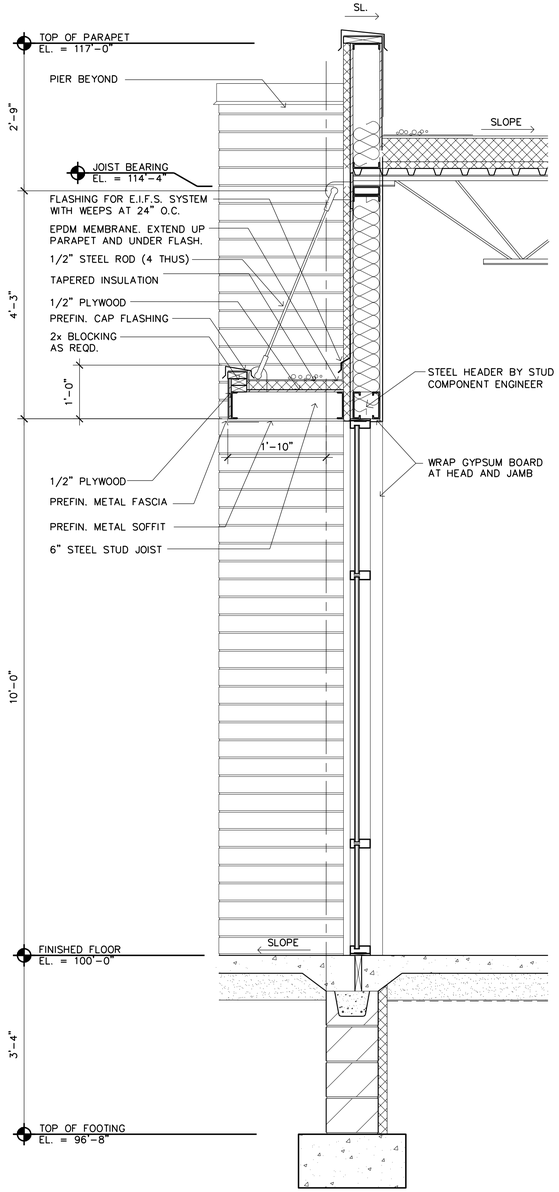
Project No. 190205-2



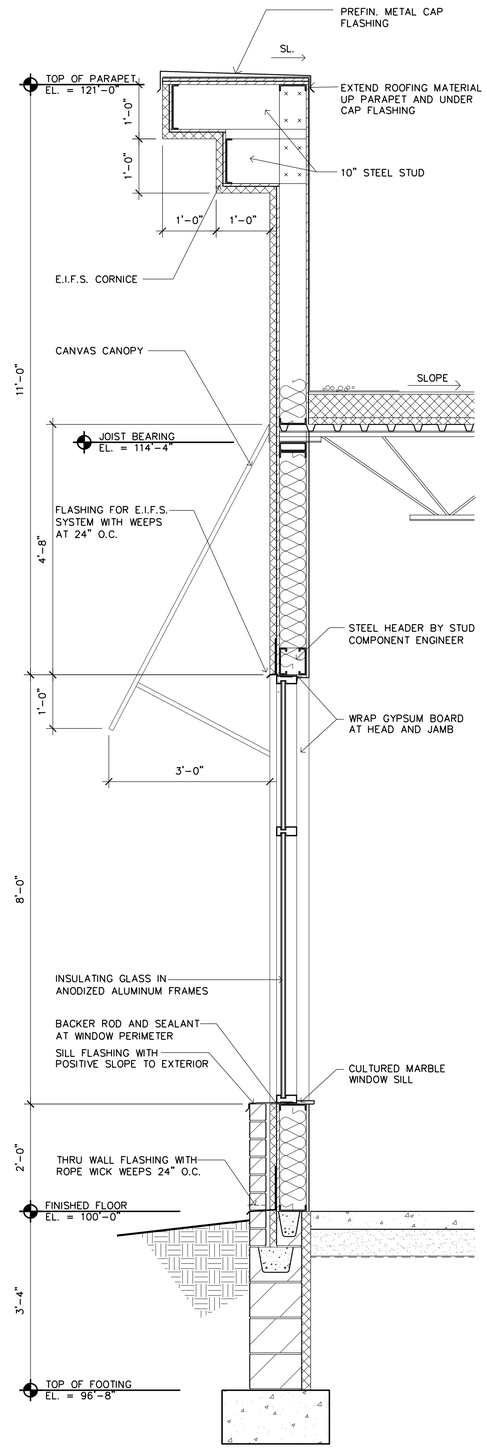
4 A6 WALL SECTION AT PIER
SCALE: 3/4" = 1'-0"



3 A6 WALL SECTION AT STONE
SCALE: 3/4" = 1'-0"



2 A6 WALL SECTION AT CANOPY
SCALE: 3/4" = 1'-0"



1 A6 WALL SECTION AT CANOPY
SCALE: 3/4" = 1'-0"

Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-A6

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Ramsey, Minnesota

Project Designer: JAMES B
Drawn By: JRB
Checked By: LL
Revisions

3/25/19	PROGRESS SET 50%
4/3/19	ISSUE FOR PERMIT

WALL SECTIONS

Sheet Number

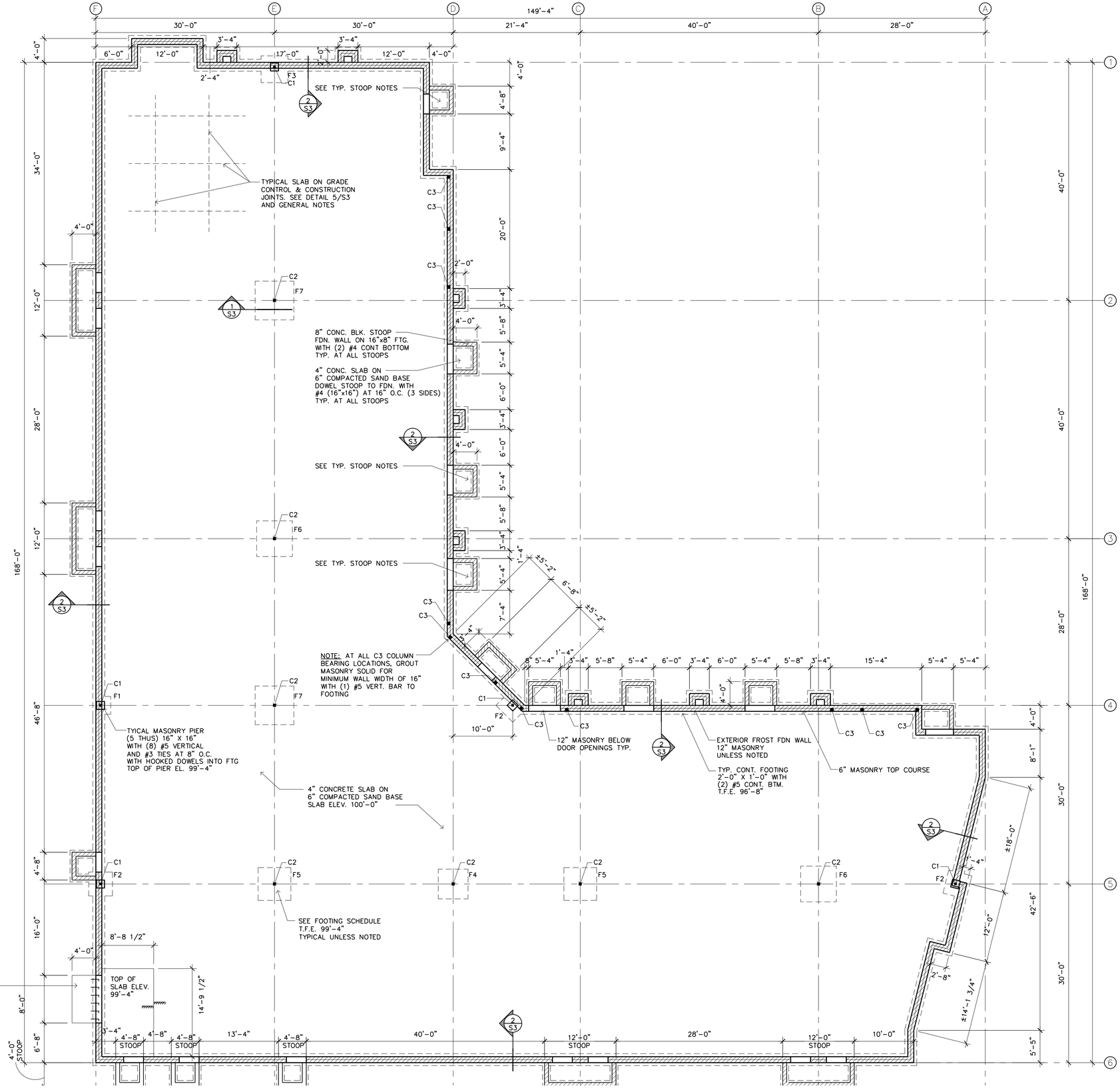
A6

Project No. 190205-2

SPREAD FOOTING SCHEDULE		
MARK	SIZE	REINFORCING EACH WAY
F1	3'-0"X3'-0"X12"	(3) #5 EACH WAY BOTTOM
F2	4'-0"X4'-0"X12"	(5) #5 EACH WAY BOTTOM
F3	4'-6"X4'-6"X12"	(5) #5 EACH WAY BOTTOM
F4	5'-0"X5'-0"X12"	(5) #5 EACH WAY BOTTOM
F5	5'-6"X5'-6"X12"	(6) #5 EACH WAY BOTTOM
F6	6'-0"X6'-0"X14"	(7) #5 EACH WAY BOTTOM
F7	6'-6"X6'-6"X16"	(6) #6 EACH WAY BOTTOM

FOOTINGS DESIGNED FOR MAXIMUM SOIL BEARING PRESSURE OF 2500 PSF. (TO BE FIELD VERIFIED BY GEOTECHNICAL ENGINEER)

STEEL COLUMN SCHEDULE			
MARK	SIZE	BASE PLATE	ANCHOR BOLT
C1	HSS 4X4X1/4	3/4"X12"X1'-0"	(4) 3/4" DIA BENT ANCHOR BOLTS
C2	HSS 5X5X1/4	3/4"X13"X1'-1"	(4) 3/4" DIA BENT ANCHOR BOLTS
C3	HSS 6X6X1/4	3/4"X14"X1'-2"	(4) 3/4" DIA BENT ANCHOR BOLTS



1 S1 FOOTING AND FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-S1

Stroh ~ ENGINEERING
P.O. BOX 78148
PLAM, WI 98178
PH/FAX: 808-463-2256

ENGINEER CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE
BERNIE STROH
PRINT NAME
14269
LICENSE NO.
4/3/19
DATE

ARMSTRONG RETAIL
Ramsey, Minnesota

Structural Engineer: B. STROH
Drawn By: JRB
Checked By: BS
Revisions

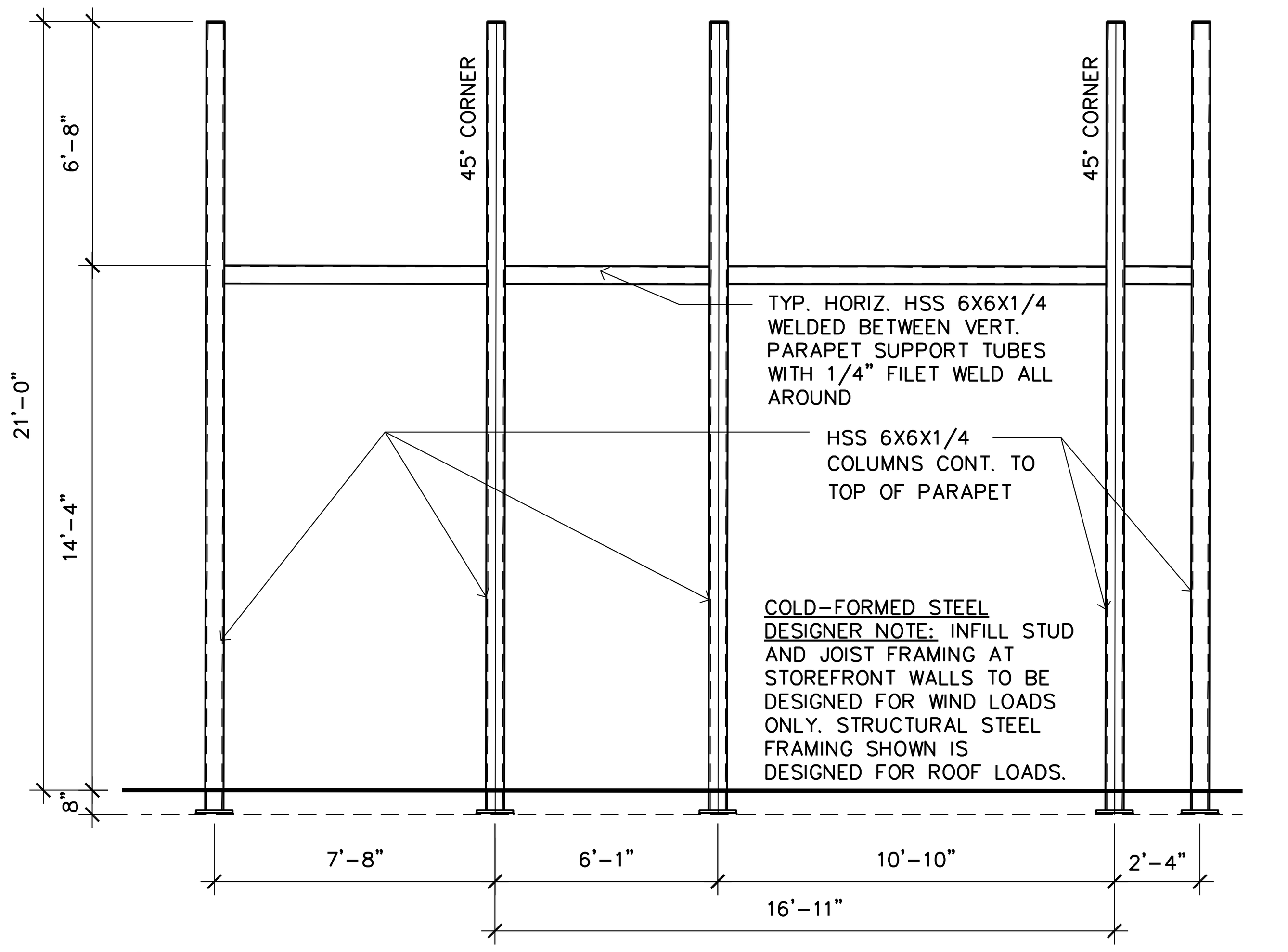
2/19/19	PRELIMINARY
4/3/19	ISSUE FOR PERMIT

FOOTING AND FOUNDATION PLAN SCHEDULES

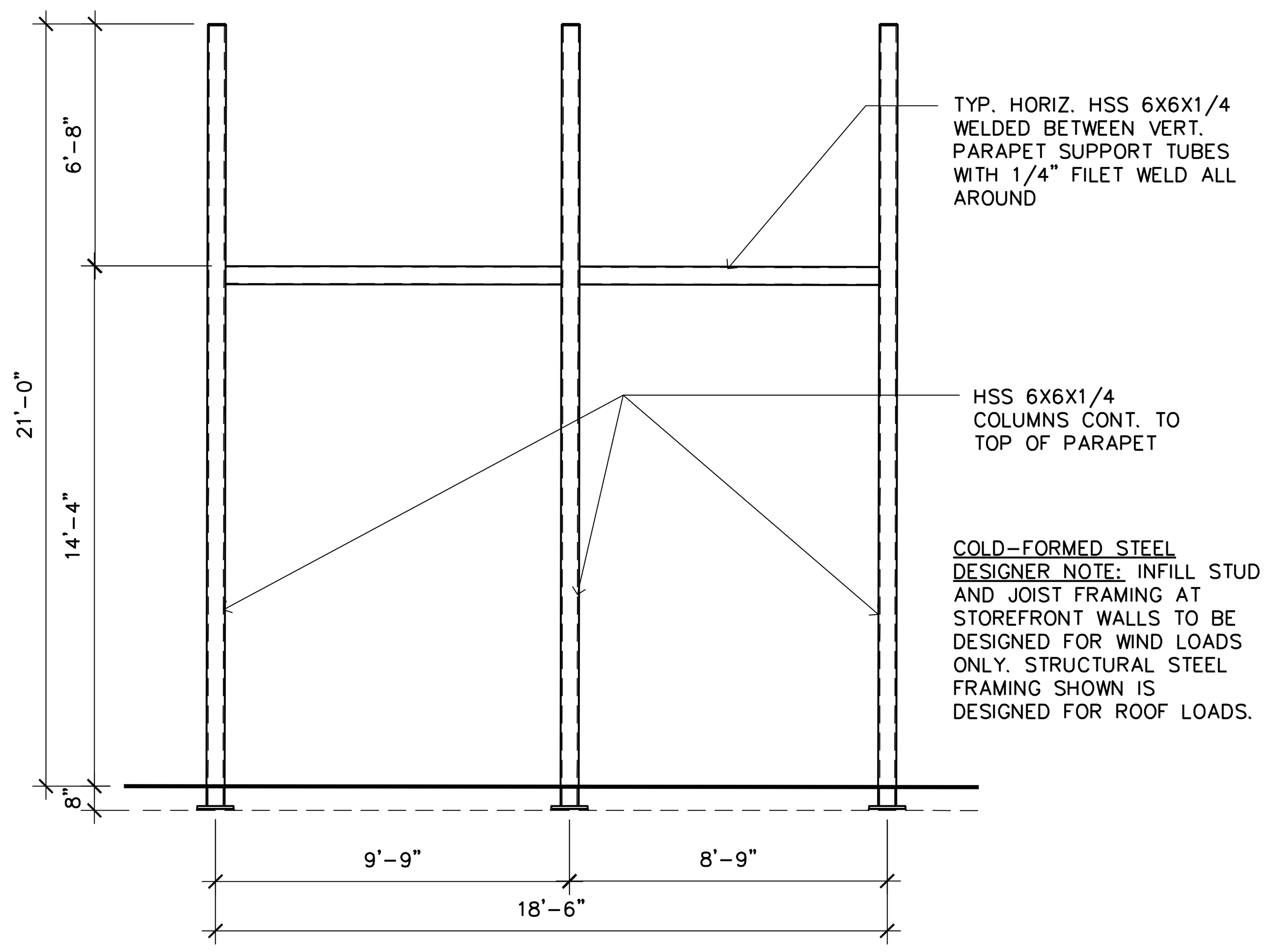
Sheet Number

S1

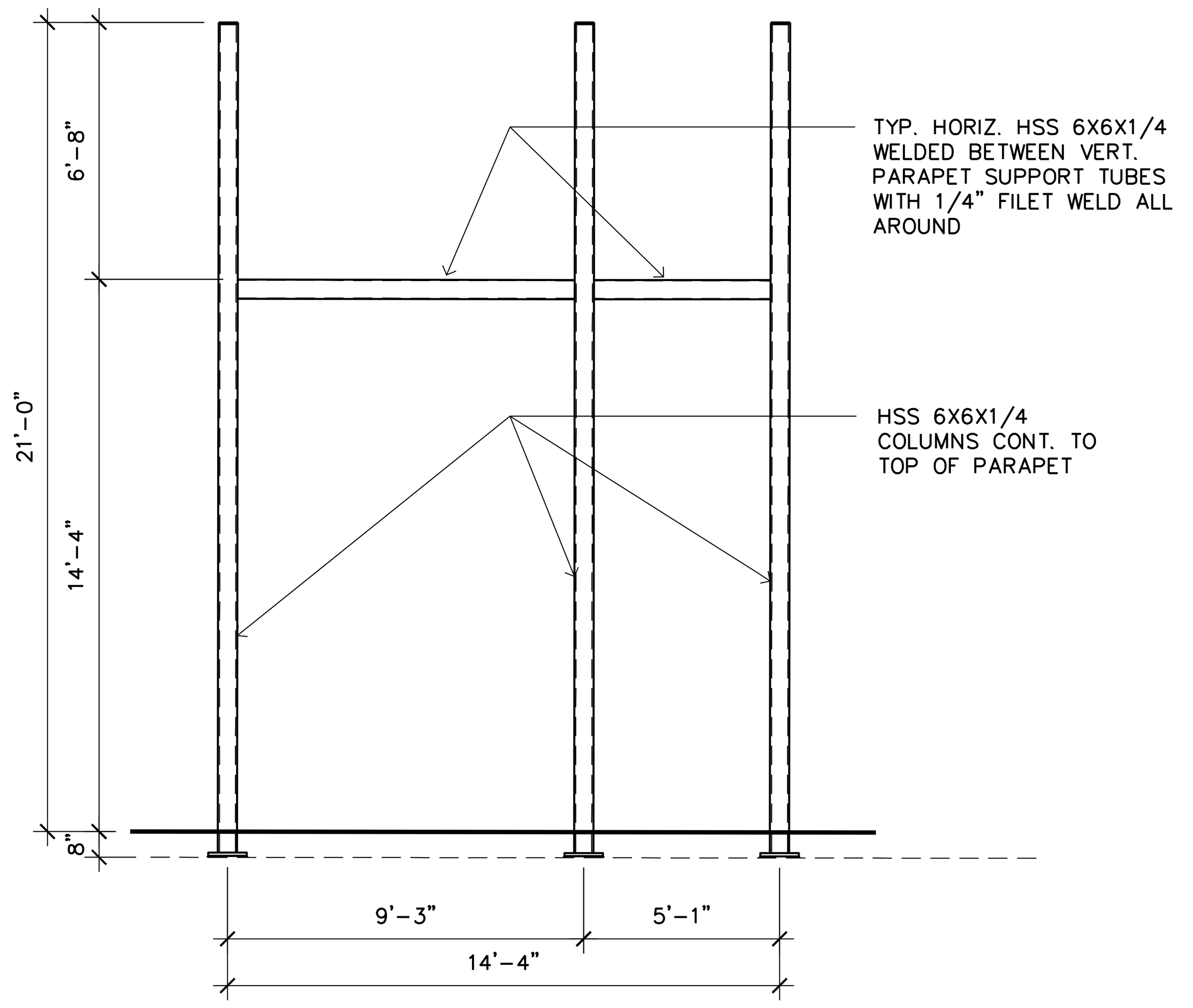
Project No. 190205-2



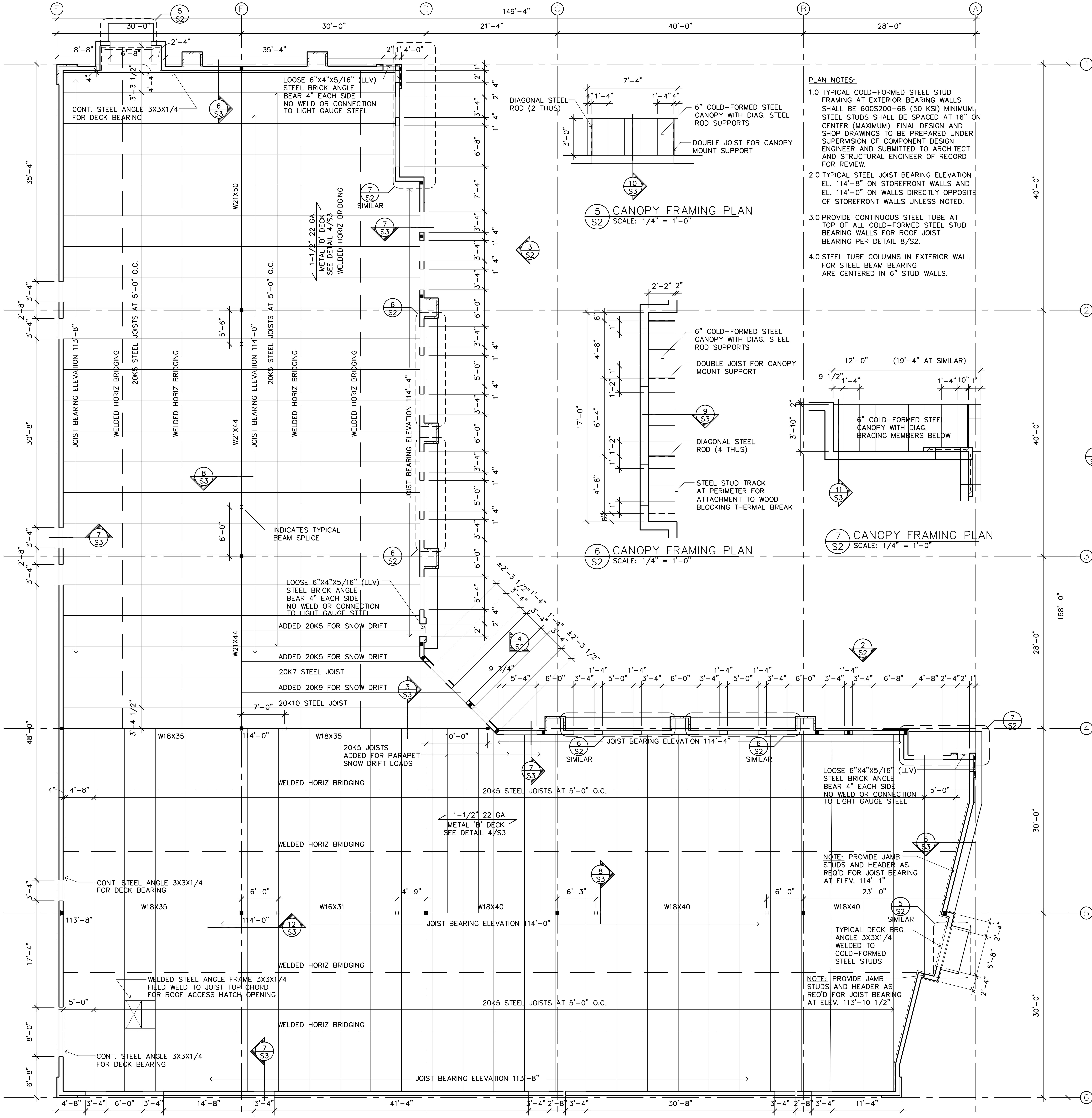
4 PARAPET SUPPORT DETAIL
S2 SCALE: 1/4" = 1'-0"



3 PARAPET SUPPORT DETAIL
S2 SCALE: 1/4" = 1'-0"



2 PARAPET SUPPORT DETAIL
S2 SCALE: 1/4" = 1'-0"



1 ROOF FRAMING PLAN
S2 SCALE: 1/8" = 1'-0"

5 CANOPY FRAMING PLAN
S2 SCALE: 1/4" = 1'-0"

6 CANOPY FRAMING PLAN
S2 SCALE: 1/4" = 1'-0"

7 CANOPY FRAMING PLAN
S2 SCALE: 1/4" = 1'-0"

PLAN NOTES:

1.0 TYPICAL COLD-FORMED STEEL STUD FRAMING AT EXTERIOR BEARING WALLS SHALL BE 600S200-68 (50 KSI) MINIMUM. STEEL STUDS SHALL BE SPACED AT 16" ON CENTER (MAXIMUM). FINAL DESIGN AND SHOP DRAWINGS TO BE PREPARED UNDER SUPERVISION OF COMPONENT DESIGN ENGINEER AND SUBMITTED TO ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR REVIEW.

2.0 TYPICAL STEEL JOIST BEARING ELEVATION EL. 114'-8" ON STOREFRONT WALLS AND EL. 114'-0" ON WALLS DIRECTLY OPPOSITE OF STOREFRONT WALLS UNLESS NOTED.

3.0 PROVIDE CONTINUOUS STEEL TUBE AT TOP OF ALL COLD-FORMED STEEL STUD BEARING WALLS FOR ROOF JOIST BEARING PER DETAIL 8/S2.

4.0 STEEL TUBE COLUMNS IN EXTERIOR WALL FOR STEEL BEAM BEARING ARE CENTERED IN 6" STUD WALLS.

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SIGNATURE
BERNIE STROH
PRINT NAME
14269
LICENSE NO.
4/3/19
DATE

ARMSTRONG RETAIL
Ramsey, Minnesota

Structural Engineer: B. STROH
Drawn By: JRB
Checked By: BS
Revisions

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ROOF FRAMING PLAN
PARAPET DETAILS

Sheet Number
S2

Project No. 190205-2

Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-S1

GENERAL STRUCTURAL NOTES:

1. BUILDING CODE:
   STRUCTURAL DESIGN CONFORMS TO THE REQUIREMENTS OF THE 2012 INTERNATIONAL BUILDING CODE (IBC) & MINNESOTA STATE BLDG. CODE (MSBC 2015)

2. DESIGN LOADS:

WIND LOAD	
BASIC WIND SPEED (3 SECOND GUST)	90 MPH (115 MPH ULT.)
WIND IMPORTANCE FACTOR, I	1.0
EXPOSURE	B
INTERNAL PRESSURE COEFFICIENTS, GC	±0.18 pi
ROOF LOAD	
LIVE LOAD (L.L.)	35 PSF **
DEAD LOAD (DESIGN D.L.)	20 PSF

3. ROOF SNOW LOAD:

GROUND SNOW LOAD, Pg	50 PSF
FLAT ROOF SNOW LOAD, Pf	35 PSF
SNOW EXPOSURE FACTOR, Ce	1.0
SNOW LOAD IMPORTANCE FACTOR, I	1.0
THERMAL FACTOR, Ct	1.0

** PLUS SNOW ACCUMULATION AS REQUIRED BY IBC, CHAPTER 16, SECTION 1608.

COORDINATION:

1. STRUCTURAL MEMBERS INCLUDING SLABS, BEAMS, JOISTS, COLUMNS AND WALLS ARE DESIGNED FOR "IN PLACE LOADS" CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING, WITHOUT OVERSTRESSING, ALL STRUCTURAL ELEMENTS (AS REQUIRED AT ANY STAGE OF CONSTRUCTION) UNTIL COMPLETION OF THIS PROJECT.

FOUNDATIONS:

1. FOOTINGS WERE DESIGNED FOR A MAXIMUM SOIL BEARING PRESSURE OF 2500 PSF. SOIL BEARING PRESSURE SHALL BE VERIFIED PRIOR TO THE CONSTRUCTION OF THE FOOTINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER. LOWER THE FOOTING ELEVATIONS SHOWN IF NECESSARY TO OBTAIN THE REQUIRED BEARING PRESSURE.

CONCRETE:

1. ALL CONCRETE SHALL BE NORMAL WEIGHT (150 PCF.) MINIMUM 28 DAY COMPRESSIVE STRENGTH, AS SPECIFIED BELOW:
   FOOTINGS AND FOUNDATION WALLS.....3000 PSI.
   SLAB ON GRADE.....4000 PSI.
2. PROVIDE 3" CLEAR COVER ON BOTTOM AND SIDES FOR FOOTING REINFORCING.
3. MAX. DISTANCE BETWEEN SLAB CONTROL OR CONSTRUCTION JOINTS SHALL NOT EXCEED 15'-0"
4. EXCEPT WHERE OTHERWISE SHOWN, SLABS ON GRADE SHALL BE REINFORCED WITH 6X6-10/10 WELDED WIRE MESH OR FIBERMESH.
5. EXCEPT WHERE OTHERWISE SHOWN, SLABS ON GRADE SHALL BE 4" THICK CONCRETE.
6. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS. ALL SLAB CONCRETE SHALL BE 4000 PSI. W/ WATER CONTENT RATIO LESS THAN .50 AND PLASTERCIZER ADDED AT JOB SITE.

REINFORCING STEEL:

1. REINFORCING STEEL SHALL CONFORM TO ASTM (GRADE 60).
2. WELDED WIRE FABRIC SHALL BE NEW BILLET STEEL, COLD DRAWN AND CONFORMING TO ASTM A185 AND A82.
3. BAR SUPPORTS, DESIGN, DETAILING, FABRICATION AND PLACING OF REINFORCING BARS AND MESH SHALL BE IN ACCORDANCE WITH THE ACI CODE AND DETAILING MANUAL.
4. UNLESS NOTED OTHERWISE, ALL REINFORCING LAP SPLICES SHALL BE 40 BAR DIAMETERS OR 12", WHICHEVER IS GREATER.

STEEL JOISTS:

1. ALL JOISTS SHALL COMPLY WITH THE STEEL JOIST INSTITUTE RECOMMENDED "CODE OF STANDARD PRACTICE FOR STEEL JOISTS FOR FABRICATION AND ERECTION."
2. ALL K SERIES JOISTS SHALL HAVE HORIZONTAL WELDED BRIDGING AS SHOWN ON PLANS OR PER SJI RECOMMENDATIONS.
3. FOR DRAINAGE, STEEL JOISTS HAVE BEEN SIZED FOR PONDING CONSIDERATION PER IBC SEC. 1611

STEEL DECK:

1. STEEL ROOF DECK SHALL BE 1-1/2" X 22 GA. "TYPE B-WIDE RIB DECK" MANUFACTURED AND ERECTED IN ACCORDANCE WITH THE STEEL DECK INSTITUTE.
2. STEEL DECK SHALL BE WELDED TO SUPPORTING MEMBERS WITH 5/8" DIA. PUDDLE WELDS AT 12" O.C. SIDELAP CONNECTIONS SHALL BE WELDED OR FASTENED WITH #12 TEKS SELF-DRILLING, SELF-TAPPING SCREWS (2 FASTENERS MINIMUM EQUALLY SPACED PER SIDELAP BETWEEN JOISTS).

COLD-FORMED STEEL FRAMING:

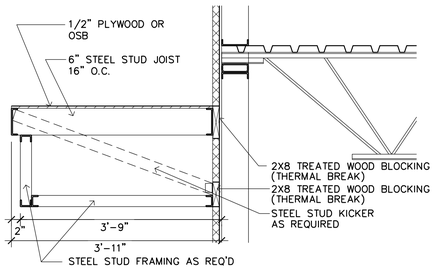
1. ALL STEEL STUDS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING AS SHOWN ON PLANS.
2. ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" (LATEST EDITION).
3. ALL STUDS AND/OR JOISTS SHALL BE FORMED FROM HOT-DIPPED GALVANIZED STEEL, G-60 COATING, CORRESPONDING TO THE REQUIREMENTS OF ASTM A446, GRADE A, WITH A MINIMUM YIELD OF 33KSI.

MASONRY:

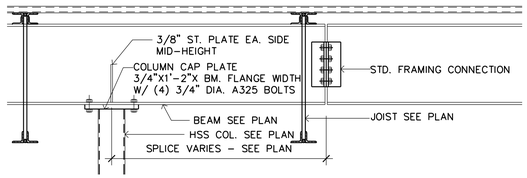
1. CONCRETE MASONRY UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C90.
2. MINIMUM COMPRESSIVE STRENGTH OF MSY. UNITS F'm 1500 PSI.
3. GROUT FOR HOLLOW MASONRY UNITS SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. AND SHALL BE NORMAL WEIGHT PEA GRAVEL CONCRETE.
4. ALL MASONRY WALLS SHALL HAVE HORIZONTAL REINFORCING FABRICATED WITH 9 GAUGE SIDE RODS. THIS REINFORCING SHALL BE LOCATED AT EVERY OTHER COURSE.
5. ALL VERTICAL REINFORCING SHALL BE CONTINUOUS WITH 40 BAR DIAMETER LAPS AT SPLICES UNLESS NOTED.

STRUCTURAL STEEL:

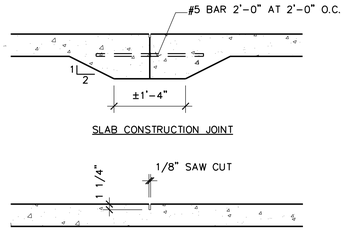
1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE AISC "MANUAL OF STEEL CONSTRUCTION"
2. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A572 OR A992. STEEL PIPE SHALL CONFORM TO ASTM A501 OR ASTM A53. STEEL TUBES SHALL CONFORM TO ASTM A500 - GRADE B.
3. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES AND SHALL CONFORM TO AWS STANDARDS.
4. ALL BOLTS SHALL BE 3/4" DIAMETER, ASTM A325.



11 S3 DETAIL AT CANOPY
SCALE: 3/4" = 1'-0"

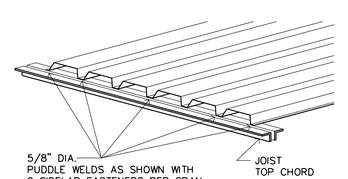


12 S3 TYPICAL DETAIL AT BEAM SPLICE
SCALE: 3/4" = 1'-0"



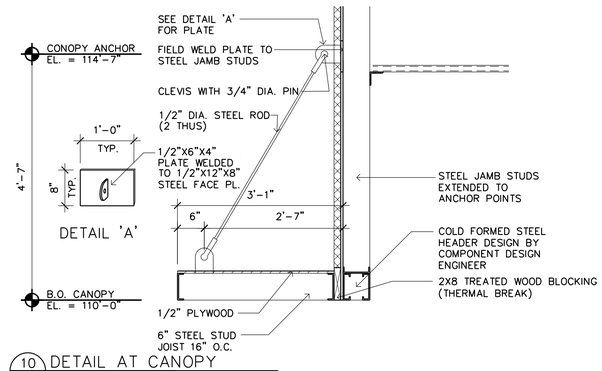
NOTES:
1. 1-1/4" DEEP SAW CUT WITH WET BLADE IMMEDIATELY AFTER FINISHING FOR 4" OR 5" SLABS. 1-1/2" DEEP FOR 6" SLABS.
2. ALL CONTROL/CONSTRUCTION JOINTS MUST BE CONTINUOUS AND NOT STAGGERED.
3. USE EXPANSION JOINT MATERIAL OR BOND BREAKER AT ALL WALLS AND TRENCH DRAINS.

5 S3 TYP. SLAB CONSTRUCTION/CONTROL JOINT DETAILS
SCALE: 3/4" = 1'-0"

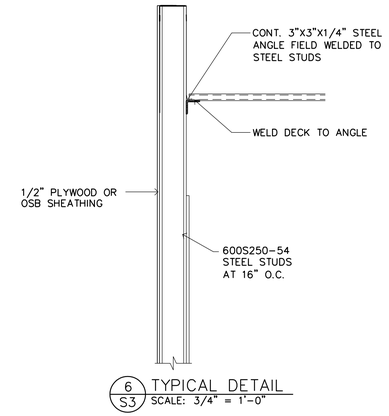


NOTE: MECHANICAL FASTENERS ARE ACCEPTABLE ALTERNATIVE TO DECK WELDING PER ENGINEERS' APPROVAL.

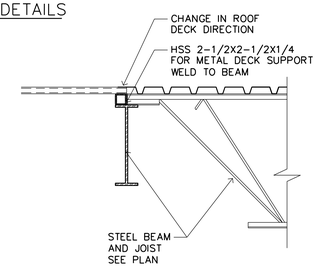
4 S3 TYPICAL DECK FASTENING DETAIL
SCALE: NOT TO SCALE



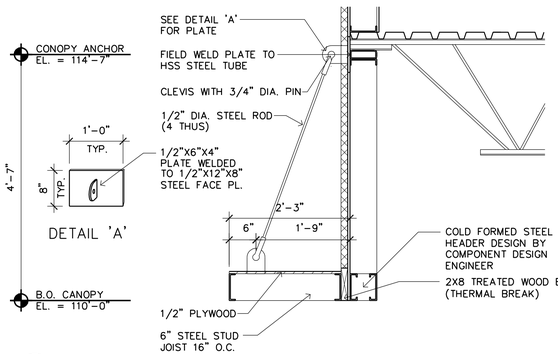
10 S3 DETAIL AT CANOPY
SCALE: 3/4" = 1'-0"



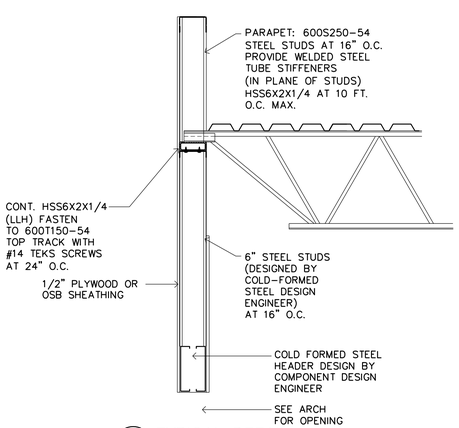
6 S3 TYPICAL DETAIL
SCALE: 3/4" = 1'-0"



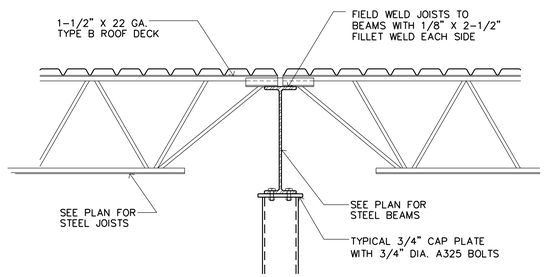
3 S3 TYPICAL SECTION
SCALE: 3/4" = 1'-0"



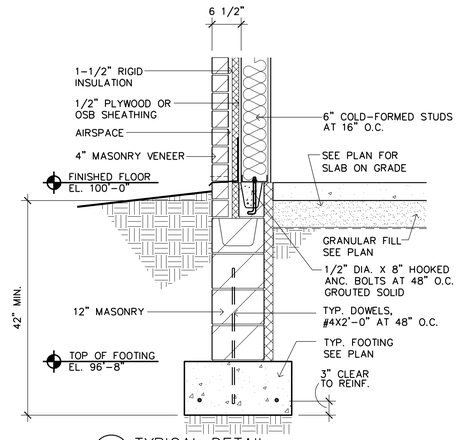
9 S3 DETAIL AT CANOPY
SCALE: 3/4" = 1'-0"



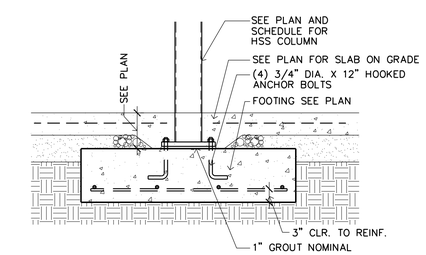
7 S3 TYPICAL DETAIL
SCALE: 3/4" = 1'-0"



8 S3 TYPICAL DETAIL AT ROOF JOIST BEARING
SCALE: 3/4" = 1'-0"



2 S3 TYPICAL DETAIL
SCALE: 3/4" = 1'-0"



1 S3 TYPICAL STEEL COLUMN FOOTING DETAIL
SCALE: 3/4" = 1'-0"

Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-S1

Stroh Engineering
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ARMSTRONG RETAIL
Ramsey, Minnesota

Structural Engineer: B. STROH
Drawn By: JRB
Checked By: BS
Revisions

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NOTES DETAILS

Sheet Number

S3

Project No. 190205-2

ARMSTRONG RETAIL

COMMERCIAL PLAN REVIEW FOR CODE COMPLIANCE

GENERAL INFORMATION

A. PROJECT NAME: Armstrong Retail
B. PROJECT LOCATION: 8019 146th Ave NW
Ramsey, Minnesota
C. ZONING AND LAND USE: COR 2: Corridor (Commercial)
D. LOT SIZE: 2.29 Acres 100,003 s.f.
– VACATED RIGHT OF WAY: 0.22 Acres 9,467 s.f.

APPLICABLE CODES:

A. RAMSEY ZONING ORDINANCE	Current Edition
B. MINNESOTA STATE BUILDING CODE (MSBC)	2015 Edition
– INCLUDING –	
C. INT'L BUILDING CODE (W/ AMENDMENTS)	2012 Edition
D. INT'L FIRE CODE (W/ AMENDMENTS	2012 Edition
E. INT'L MECHANICAL CODE (W/ AMENDMENTS)	2012 Edition
F. MINNESOTA PLUMBING CODE	2015 Edition
G. NATIONAL ELECTRICAL CODE (NEC)	2017 Edition
H. MINNESOTA STATE ENERGY CODE	2015 Edition
J. MINNESOTA STATE ACCESSIBILITY CODE	2015 Edition
K. MINNESOTA CONSERVATION CODE /EX BLDGS	2015 Edition

BUILDING CLASSIFICATION

A. OCCUPANCY GROUPS/ TYPE OF CONST (IBC Chpt 3 & IBC Chpt 6)
1. Potential Occupance Groups:
– Group A-2
– Group B
– Group M
– Group S-1
– Type of Construction V-B
– Area 15,152 s.f.
– Proposed Height 21'-0", 1 Story
– Group A-2 Is The Most Restrictive Occupancy
2. Mixed Occupancy (IBC 508)
– Occupancy Groups Intended To Be Non-Separated
3. Incidental Uses (IBC 509)
– None

B. FIRE-RESISTANCE-RATED CONSTRUCTION
1. Building Elements (IBC Tables 601 & 602)

Element	Rating
Structural Frame	0 Hours
Exterior Bearing Walls	0 Hours
Interior Bearing Walls	0 Hours
Exterior Non-Bearing Walls	0 Hours
Interior Non-Bearing Walls	0 Hours
Floor Construction	0 Hours
Roof Construction	0 Hours

2. Exterior Wall Openings (IBC Table 705.8)
– Separation Distance 29'-7"

Classification	Area of Opening
Unprotected	No Limit
Protected	No Limit

3. Fire Walls (IBC 706)
– Not Required –
4. Fire Barriers (IBC 707)
– Not Required –
5. Fire Partitions (IBC 708)
– Not Required –

C. ROOF AND INTERIOR FINISH REQUIREMENTS
1. Minimum Wall And Ceiling Finish Requirement (IBC Table 803.9)

Building Component	Finish Class
Vertical Exits/ Exit Passageways	Class B – Groups A-2,B,M Class C – Group S-1
Exit Access Corridors/ Other Exit ways	Class B – Group A-2 Class C – Groups B,M,S-1
Rooms and Enclosed Spaces	Class C

2. Minimum Roof Covering Classification (IBC Table 1505.1) = Class C
– (Contractor To Provide Class A Roof Assembly)

AUTOMATIC SPRINKLER REQUIREMENTS

A. AN NFPA 13 AUTOMATIC SPRINKLER SYSTEM IS PROVIDED THROUGHOUT THE BUILDING (MN CHAPTER 1306.0020.3)

ALLOWABLE HEIGHT, ALLOWABLE AREA

(Group A-2 Is More Restrictive Than Group B, M, S-1)
A. ALLOWABLE HEIGHT (IBC Table 503)
Group A-2:
1. Group A-2, Type V-B
– 40'-0", 1 Story + Sprinkler Increase (IBC 504.2) = 60'-0", 2 Stories
2. Height Check
– 1 Story < 2 Stories
– 21'-0" < 60'-0"

B. ALLOWABLE AREA (IBC Table 503)
(Group A-2 Is More Restrictive Than Group B, M, S-1)
Group A-2:
1. Group A-2, Type V-B
– Tabular Area = 6,000 s.f.
– Frontage Increase (IBC 506.2)
$6{,}000 \times \left(\frac{(66.3')}{(66.3')} - .25\right) \times \frac{(29.6')}{30'}$ = 4,440 s.f.
– Sprinkler Increase (IBC 506.3)
Tabular Area x 3 = 18,000 s.f.
Per Floor = 28,440 s.f.
2. Area Check
– Whole Building Area Check
15,152 s.f. / 28,440 s.f. (53.3%) < 100%

MEANS OF EGRESS

A. DESIGN OCCUPANT LOAD (IBC Table 1004.1.2)
1. To Be Determined
B. EXITS
1. Number Required (IBC 1015/ 1021) = 2
2. Number Accessible Required (IBC 1007) = 2
3. Arrangement (IBC 1015.2)
– Not Less Than 1/3 Overall Diagonal (Sprinklered Building)
4. Travel Distance Maximums
– Exit Access (IBC 1016) = 250'/300'
– Common Path of Egress (IBC 1014.3) = 75'/100'
– Dead Ends (IBC 1018.4) = 20'/50'
5. Sizing (The Greater of Two Conflicting Widths Shall Be Used)
– Design Egress Sizing (IBC 1005.3)
Stairways (Occ Load x .3) = N/A
Other Components (Occ Load x .2) = TBD
– Stairways (IBC 1009.4) = 44"
– Corridors (IBC 1018.2) = 44"
– Exit Passageways (IBC 1023.2) = 44"
– Exit Doors (IBC 1008.1.1) = 32" Min Clear
48" Max Nom
6. Doors
– Swing (IBC 1008.1.2)
Side Hinged Swinging Out At Occupant Load Of 50 Or More
– Landings (IBC 1008.1.6)
Width Not Less Than Width of Door Or Stairway
Length in Direction of Travel Not Less Than 44"
– Thresholds (IBC 1008.1.7)
Max Height = 1/2" – 1:2 Beveled Edge If 1/4"–1/2"
– Door Arrangement (IBC 1008.1.8) 48" + Door Width Apart
– Lock or Latch (IBC 1008.1.9)
Operable From Inside Without Use of Knowledge or Keys.
Manually Operated Flush Bolts Permitted With Sprinkler System.
– Panic/ Fire Exit Hardware (IBC 1008.1.10)
Required At Exit/Exit Access Doors In Group A-2

PLUMBING FIXTURES

A. NUMBER FIXTURES REQUIRED (IBC 2902.1)
1. To Be Determined

OTHER

A. ACCESSIBILITY (MN State Accessibility Code)
1. Building is Accessible
B. ROOF ACCESS (IMC 306.5)
1. 60" Ships Ladder To 8 s.f. Roof Hatch (Min Dim 1'-8") Provided –Provide 42" Guard If Opening Is Within 10' Of Roof Edge.
C. CONCEALED SPACES
1. Floors (IBC 718.3)
– Draftstops Not Required in Sprinklered Building
2. Attics (IBC 718.4)
– Draftstops Not Required in Sprinklered Building
D. VENTILATION
1. Attics (IBC 1203.2)
– Not Required
2. Under-Floors (IBC 1203.3)
– Not Required
E. SAFETY GLAZING (IBC 2406)
1. Safety Glazing Shall Be Installed In Hazardous Locations As Specified In IBC 2406.4
F. RECYCLING SPACE (MSBC 1303.1500)
1. .0025 x 15,152 s.f. = 38 s.f. Required
G. FIRE ALARM AND DETECTION SYSTEMS
1. Fire Alarm And Detection System Not Required (IBC 907.2)
2. If Required Provide Audible And Visible Alarm Notification Devices (IBC 907.5, NFPA 72)

H. PARKING AND MANEUVERING (Ramsey Zoning Ordinance)
1. Parking Stall Calculation

	Minimum	Maximum
RETAIL 15,152 s.f. @ 2/1,000 s.f. (Minimum)	30 Stalls	
RETAIL 15,152 s.f. @ 4/1,000 s.f. (Maximum)		61 Stalls
Resteraunt 3,600 s.f. @ 3/1,000 s.f. (Maximum)	11 Stalls	
Resteraunt 3,600 s.f. @ 5/1,000 s.f. (Maximum)		18 Stalls
Total Stalls Required	41 Minimum	79 Maximum
Total Stalls Provided	53 Stalls	
Accessible Requirement Per 54 Stalls (IBC Table 1106.1)	3 Stalls	2 Provided at Future Pad Site

2. Stall Size – 9'-0" x 18'-0"
3. Aisle Size – 24'-0"
4. Striping – 4" White Stripes
5. Pavement Design
– All Drive Aisles And Truck Maneuvering Areas
2" Bituminous Wear Course MN. D.O.T. 2331 Type 41
2" Bituminous Binder Course MN. D.O.T. 2331 Type 31
8" Compacted Class 5 Base MN. D.O.T. 3138
– All Parking Areas
1 1/2" Bituminous Wear Course MN. D.O.T. 2331 Type 41
1 1/2" Bituminous Binder Course MN. D.O.T. 2331 Type 31
6" Compacted Class 5 Base MN. D.O.T. 3138
– Verify With Existing Soil Conditions And Adjust Accordingly

NOTE TO ALL DESIGN/BUILD CONTRACTORS AND THEIR SUB-CONTRACTORS:

THE DESIGN/BUILD CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL MECHANICAL, ELECTRICAL, PLUMBING, FIRE SPRINKLER, OR ANY OTHER DESIGN/BUILD SUB-CONTRACTOR'S DOCUMENTS AS PERTAINING TO THE WORK FOR THIS PROJECT. IT IS THE DESIGN/BUILD SUB-CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE DESIGN/BUILD CONTRACTOR OF ANY CONFLICTS WITH THE ARCHITECTURAL AND STRUCTURAL DOCUMENTS DUE TO SIZES, LOCATIONS, QUANTITIES, ROUGH-IN DIMENSIONS AND CODE INTERPRETATIONS. THE DESIGN/BUILD CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ARCHITECT IMMEDIATELY OF ANY ARCHITECTURAL REVISIONS REQUIRED DUE TO THE COORDINATION OF EACH DESIGN/BUILD SUB-CONTRACTOR'S DOCUMENTS.

ANSI/ASHRAE STANDARD 90.1-2010

Note: Compliance Is For Building Envelope Only. The Design-Build HVAC and Electrical Designers Must Submit Documentation Proving Compliance Based On The Equipment Being Installed.

GENERAL

A. Space Conditioning Category (5.1.2)
1. Nonresidential Conditioned Space
B. Climate (5.1.4)
1. Zone 6 – Southern Minnesota

COMPLIANCE PATH

A. Prescriptive Building Envelope Option (5.2)

MANDATORY PROVISIONS

A. Components Of The Building Envelope Shall Comply With Section 5.4
1. Insulation (5.4.1) Shall Comply With Section 5.8.1.1 – 5.8.1.9
2. Fenestration/ Door Performance (5.4.2) Shall Comply With Section 5.8.2
3. Air Leakage (5.4.3)
The Building Envelope Shall Contain An Air Barrier And Be Sealed At The Following Areas:
– Joints Around Fenestration And Door Frames
– Junctions Between Walls and Floors, Walls At Building Corners, Walls and Roofs or Ceilings
– Penetrations Of Utility Services At Walls, Floors, and Roofs
– Building Assemblies Used As Ducts Or Plenums
– Joints, Seams, Conn. Between Planes Or Changes In Air Barrier Materials
Fenestration and Doors – According To 5.4.3.2
Loading Dock Weatherseals – Required According To 5.4.3.3
Vestibules – Required at Building Entrances According To 5.4.3.4

PRESCRIPTIVE REQUIREMENTS

Table 5.5-6 Building Component	Maximum Assembly	Minimum Insulation	Proposed
ROOF: Entirely Above Deck	U-0.048	R-20 (ci)	R-30 (ci)
WALLS: Steel Frame	U-0.064	R-13.0 + R-7.5 (ci)	R-19 + R-7.5 (ci)
S. O. G. FLOORS: Unheated	F-0.540	R-10.0	R-10
OPAQUE DOORS: Swinging	U-0.700		U-0.20
OPAQUE DOORS: Non-Swinging	U-0.500		U-0.147
FENESTRATION: 0-40% Glazing	U-0.450 (0.40 SHGC)		U-0.340

SUBMITTALS

A. Contractor To Provide Product Submittals If Requested By The Building Official

PRODUCT INFORMATION AND INSTALL. REQ.

A. Building Components Must Identify R-Values Or U-Values Clearly Labeled On The Product In Accordance With Section 5.8

DEVELOPMENT TEAM

OWNER
PSD LLC
7533 Sunwood Dr, Suite 315
Ramsey, MN 55303
Phone: 763-427-5955
Contact: Matt Kuker

CONSTRUCTION MANAGER
MILLER ARCHITECTS
P.O. Box 1228
St. Cloud, MN 56302
Phone: 320-267-1896
Contact: Joe Siefert

ENGINEER
STROH ENGINEERING
P.O. Box 792140
Paia, HI 96779
Phone: 808-463-2256
Contact: Bernie Stroh

CIVIL ENGINEER
HAKANSON ANDERSON
3601 Thurston Ave
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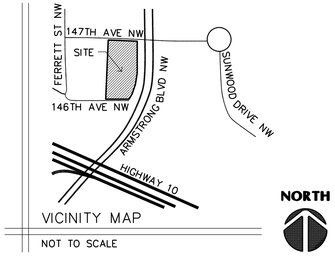
Phone: 763-427-5860
Contact: Shane Nelson

ARCHITECT
LAMPERT ARCHITECTS
420 Summit Ave
St. Paul, MN 55102
Phone: 763-755-1211
Contact: James Berthiaume

SHEET SCHEDULE

VICINITY MAP



VICINITY MAP
NOT TO SCALE

LAMPERT ARCHITECTS
420 Summit Avenue
St. Paul, MN 55102
Phone:763.755.1211 Fax:763.757.2849
lampert@lampert-arch.com

ARCHITECT CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE
LEONARD LAMPERT
PRINT NAME
13669
LICENSE NO.
4/3/19
DATE

ARMSTRONG RETAIL
Ramsey, Minnesota

Project Designer: JAMES B
Drawn By: JRB
Checked By: LL
Revisions

2/19/19	PRELIMINARY
3/25/19	PROGRESS SET 50%
4/3/19	ISSUE FOR PERMIT

TITLE SHEET

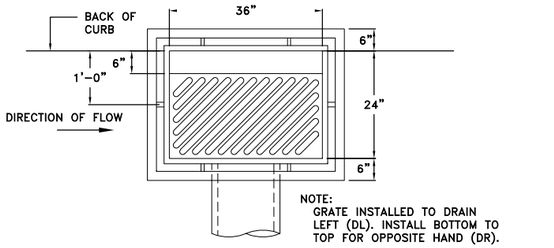
Sheet Number
T1

Project No. 190205-2

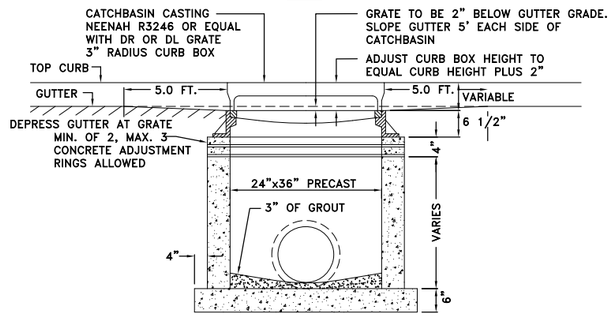
Filename: ARMSTRONG RETAIL\ARMSTRONG RETAIL-T1

GENERAL CONSTRUCTION AND SOILS NOTES:

1. STRIP ALL INPLACE TOPSOIL IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. IN AREAS OF PARKING LOT AND BUILDING CONSTRUCTION, THE EXPOSED SAND SHALL BE SURFACE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY, ASTM D698, IN AT LEAST THE UPPER 3 FEET.
2. UNLESS OTHERWISE RECOMMENDED IN THESE PLANS, THE GRADING SUBGRADE SHALL BE CONSTRUCTED OF SUITABLE GRADING MATERIAL. THE FILL SHALL BE PLACED IN 8'' TO 10'' LOOSE LIFTS, AND COMPACTED TO 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
3. SUITABLE GRADING MATERIAL FOR THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, SILT, DEBRIS, ORGANIC MATERIAL AND OTHER UNSTABLE MATERIAL.
4. IF AVAILABLE, CONTRACTOR SHALL REVIEW THE GEOTECHNICAL EXPLORATION REPORT FOR ADDITIONAL SITE PREPARATION REQUIREMENTS.
5. PROVIDE A SAWCUT WHEN PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT AND AT TERMINI OF CONSTRUCTION TO ENSURE A UNIFORM JOINT.
6. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.04 GAL/SY TO 0.06 GAL/SY BETWEEN BITUMINOUS LAYERS. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS.
7. PERFORMANCE GRADED (PG) ASPHALT BINDER PG 58S-28, MN/DOT SPEC. 3151, SHALL BE USED FOR ALL BITUMINOUS MIXES ON THIS PROJECT.
8. THE BITUMINOUS MIXTURES SHALL MEET THE REQUIREMENTS OF SPECIFICATIONS 2360 AND 3139.

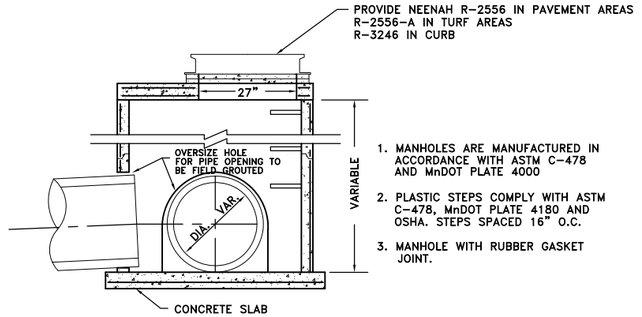


PLAN



SECTION

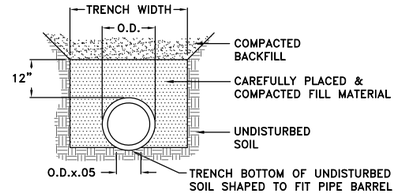
1/2 STANDARD CURB INLET
NO SCALE



1. MANHOLES ARE MANUFACTURED IN ACCORDANCE WITH ASTM C-478 AND MnDOT PLATE 4000
2. PLASTIC STEPS COMPLY WITH ASTM C-478, MnDOT PLATE 4180 AND OSHA. STEPS SPACED 16" O.C.
3. MANHOLE WITH RUBBER GASKET JOINT.

STANDARD STORM MANHOLE
48" THRU 72" DIAMETER

2/2 STANDARD CATCH BASIN MANHOLE
NO SCALE



NOTE: WORKING SPACE ON EACH SIDE OF PIPE SHALL BE NOT LESS THAN 12", OR ONE THIRD (1/3) THE INSIDE DIAMETER OF THE PIPE, BUT NOT TO EXCEED 24" EACH SIDE OF THE PIPE. IF THE TRENCH WIDTH EXCEEDS THIS MAXIMUM, THE CONTRACTOR SHALL FURNISH & INSTALL A BETTER GRADE OF BEDDING MATERIAL OR A HIGHER CLASS OF PIPE AS REQUIRED FOR THE ACTUAL TRENCH WIDTH AT NO EXTRA COST TO OWNER. SEE SPECIFICATIONS.

3/2 PIPE BEDDING
NO SCALE

TABLE A
MODIFIED CLASS 5 SPECIFICATIONS

% PASSING

1"	100
3/4"	90 – 100
3/8"	50 – 80
No.4	35 – 70
No.10	20 – 60
No.40	10 – 35
No.200	5 – 10

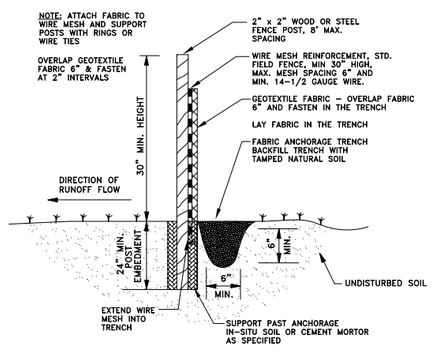
NOTES:
1. THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.
2. IF THE AGGREGATE BASE FAILS TO MEET THE REQUIREMENTS OF TABLE A THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEET THE REQUIREMENTS OF TABLE A.
3. IN THE EVENT THAT RECYCLED MATERIAL IS USE IT MUST MEET MNDOT REQUIREMENTS FOR RECYCLED BASE.

APPROVED: 2-2003

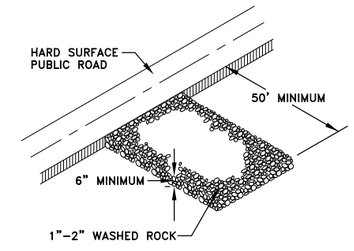
City of RAMSEY

STANDARD DETAILS: MODIFIED CLASS 5 SPECIFICATION

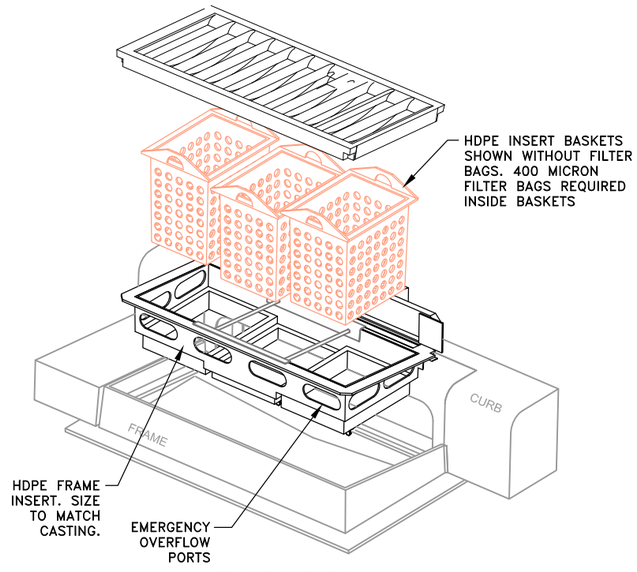
CITY PLATE No. STR-26



4/2 SILT FENCE DETAIL
NO SCALE



5/2 ROCK CONSTRUCTION ENTRANCE
NO SCALE



6/2 INLET PROTECTION
NO SCALE

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

SHANE M. NELSON, P.E.
Date 5/9/19 Lic. No. 43381

DESIGNED BY: AMT
DRAWN BY: AMT
CHECKED BY: SMN

Hakanson Anderson
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WEST ARMSTRONG RETAIL

DETAILS

CITY OF RAMSEY, MINNESOTA

SHEET 2 OF 12 SHEETS

2325.09

May 24, 2019 - 2:03pm
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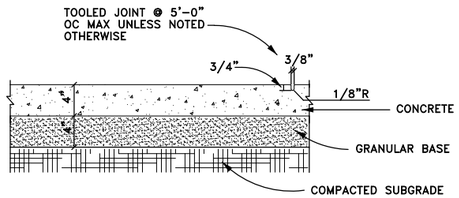
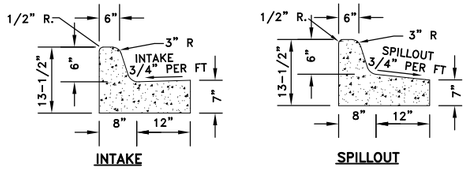
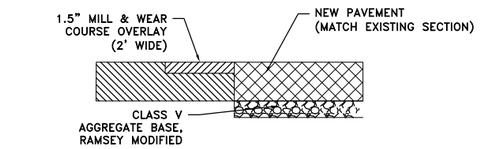


1/3 CONCRETE JOINT DETAIL
NO SCALE



NOTE: ALL PARKING LOT TO HAVE B612 CONCRETE CURB & GUTTER DRAINAGE ARROWS INDICATE SPILLOUT AND INTAKE CONFIGURATION

2/3 B612 CONCRETE CURB & GUTTER



3/3 BITUMINOUS PATCH REPAIR SECTION
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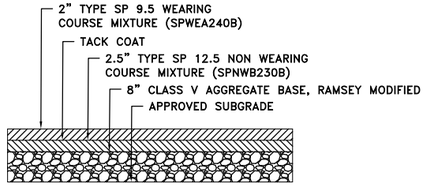

4/3 HEAVY-DUTY PAVEMENT SECTION
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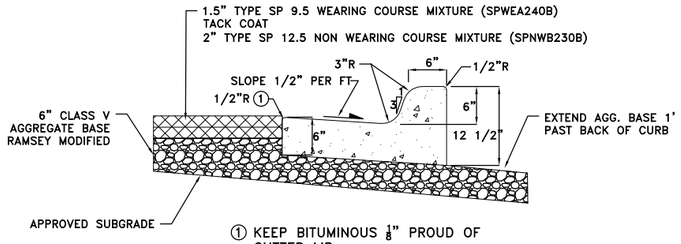
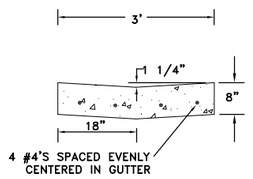
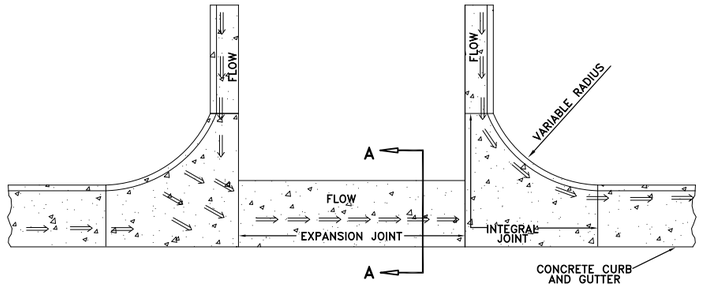


(1) KEEP BITUMINOUS 1/8" PROUD OF GUTTER LIP

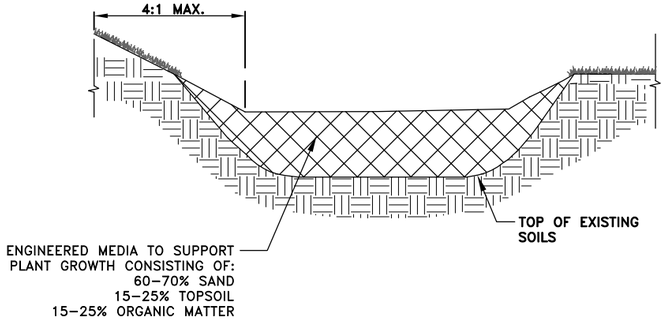
5/3 TYPICAL PAVEMENT/CURB SECTION
NO SCALE



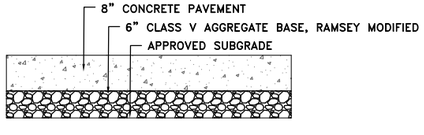
SECTION AA



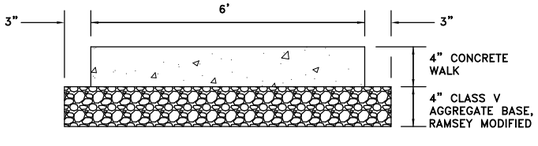
6/3 TYPICAL CROSS GUTTER
NTS



7/3 INFILTRATION BASIN DETAIL
NTS



8/3 CONCRETE PAVEMENT
NO SCALE



9/3 CONCRETE SIDEWALK
NO SCALE

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

SHANE M. NELSON, P.E.
Date 5/9/19 Lic. No. 43381

DESIGNED BY: AMT
DRAWN BY: AMT
CHECKED BY: SMN

Hakanson Anderson
Civil Engineers and Land Surveyors
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763-427-5860 FAX 763-427-0520
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WEST ARMSTRONG RETAIL

DETAILS

CITY OF RAMSEY, MINNESOTA

SHEET 3 OF 12 SHEETS

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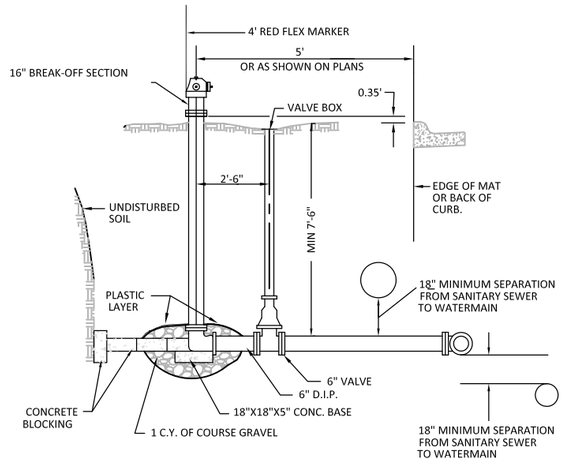
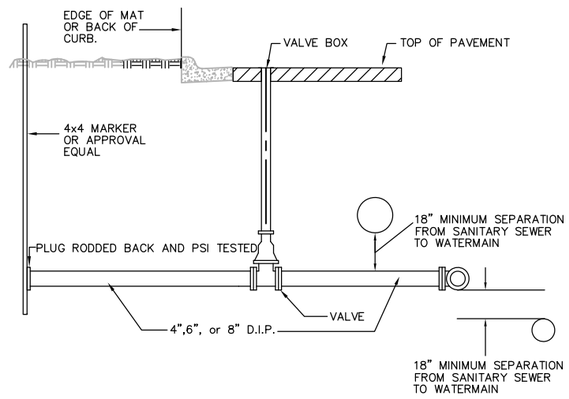


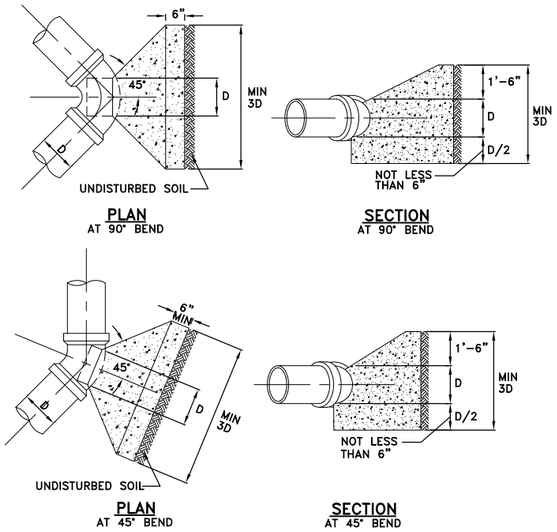
NOTES:
1. HYDRANT SHALL BE 5-1/4" WB67 WATEROUS PACER.
2. HYDRANTS TO BE ORDERED FOR 8'-0" BURY. IN AREAS OF EXTRA DEPTH ON THE WATERMAIN, HYDRANTS EXTENSIONS MAY BE REQUIRED.
3. HYDRANTS SHALL BE BLOCKED OR TIED TO THE TEE AT MAIN WITH 2-3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION. RESTRAINED JOINT PIPE AND RETAINING GLANDS MAY BE USED.
4. TOP NUT OF HYDRANT 2.5' ABOVE TOP BACK OF CURB OR BITUMINOUS SURFACE.
5. HYDRANTS BURIED BELOW WATER TABLE, DRAIN HOLES NEED TO BE PLUGGED AND HYDRANT MARKED BY PAINTING 5" CAP YELLOW.
6. BRUSH PAINT ALL HYDRANTS AFTER INSTALLATION IS COMPLETE.

1/4 **TYPICAL HYDRANT LAYOUT**
NTS

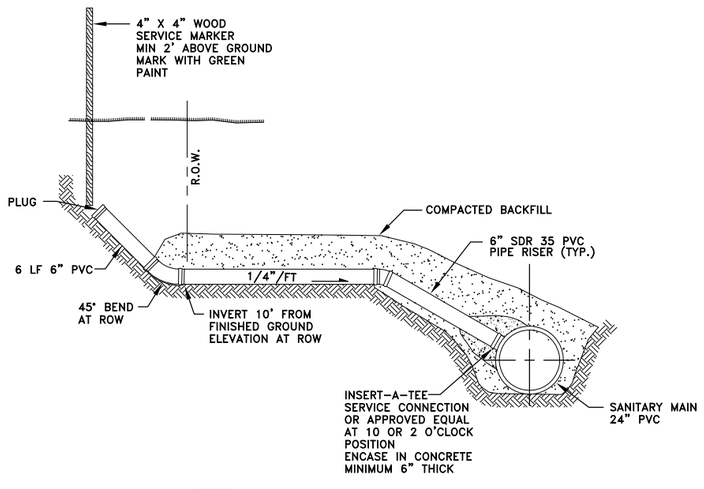


NOTES:
1.SHALL BE BLOCKED OR TIED TO THE MAIN WITH 2-3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION. RESTRAINED JOINT PIPE AND RETAINING GLANDS MAY BE USED.

2/4 **COMMERCIAL WATER SERVICE**
NTS

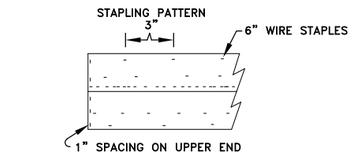


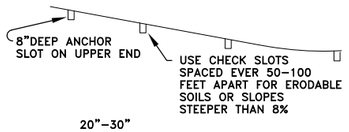
3/4 **REACTION BACKING**
NO SCALE

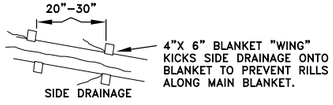


NOTES:
1. 10 GAGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL SEWER LINES
2. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE.
3. TRACER WIRE ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS.

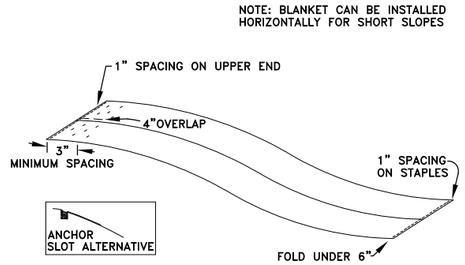
4/4 **SANITARY SERVICE CONNECTION**
NTS







BLANKET INSTALLATION IN AREAS OF CONCENTRATED FLOW



BLANKET INSTALLATION IN AREAS OF SHEET FLOW

5/4 **EROSION CONTROL BLANKET**
NTS

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

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SHANE M. NELSON, P.E.
Date 5/9/19 Lic. No. 43381

DESIGNED BY: AMT
DRAWN BY: AMT
CHECKED BY: SMN

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WEST ARMSTRONG RETAIL

DETAILS

CITY OF RAMSEY, MINNESOTA

SHEET 4 OF 12 SHEETS

2325.09

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GENERAL NOTES:

1. INSTALL SILT FENCE AND INLET PROTECTION AS SHOWN AND PER DETAILS ON SHEET 2 PRIOR TO REMOVALS, GRADING, OR EARTH DISTURBANCE.
2. REVEGETATION AND STABILIZATION SHALL OCCUR WITHIN 7 DAYS OF ROUGH GRADING.
3. STREETS AND PROPERTY ADJACENT TO THE CONSTRUCTION SHALL BE KEPT FREE FROM SEDIMENT CAUSED BY CONSTRUCTION TRAFFIC, SITE RUNOFF AND BLOWING DUST. HAND BROOM OR PICKUP SWEEPER SHALL BE EMPLOYED AS NEEDED OR AT THE REQUEST OF THE CITY OF RAMSEY. KICK BROOM STYLE SWEEPER NOT ALLOWED.
4. ALL DISTURBED AREAS SHALL RECEIVE 4" TOPSOIL AND BE SEEDED WITH Mn/DOT SEED MIX 25-131 OR APPROVED EQUAL. APPLY FERTILIZER AND MULCH PER THE RECOMMENDATIONS OF THE MNDOT SEEDING MANUAL. CATEGORY 3 EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL SLOPES STEEPER THAN 4:1.

SCALE 20 0 20 40 IN FT.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING GAS
- EXISTING TELEPHONE
- EXISTING OVERHEAD UTILITY
- EXISTING UNDERGROUND ELECTRIC
- PROPOSED STORM SEWER
- PROPOSED STORM SEWER STRUCTURES
- SILT FENCE, PER 4/2
- INLET PROTECTION, PER 6/2 OR EQUAL
- EROSION CONTROL BLANKET, PER 5/4

ARMSTRONG BOULEVARD

INSTALL EROSION CONTROL BLANKET ON FINISHED GRADED SLOPES

RIPRAP BASIN OUTLET INV=871.20

INFILTRATION BASIN BOT=867.00 NWL=871.20

FUTURE BUILDING FFE=876.00

PROPOSED BUILDING FFE=875.00

147TH AVENUE

Concrete Curb & Gutter

R.872.38

811 Know what's below. Call before you dig.

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

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WEST ARMSTRONG RETAIL

EROSION CONTROL PLAN
CITY OF RAMSEY, MINNESOTA

SHEET 8 OF 12 SHEETS

2325.09

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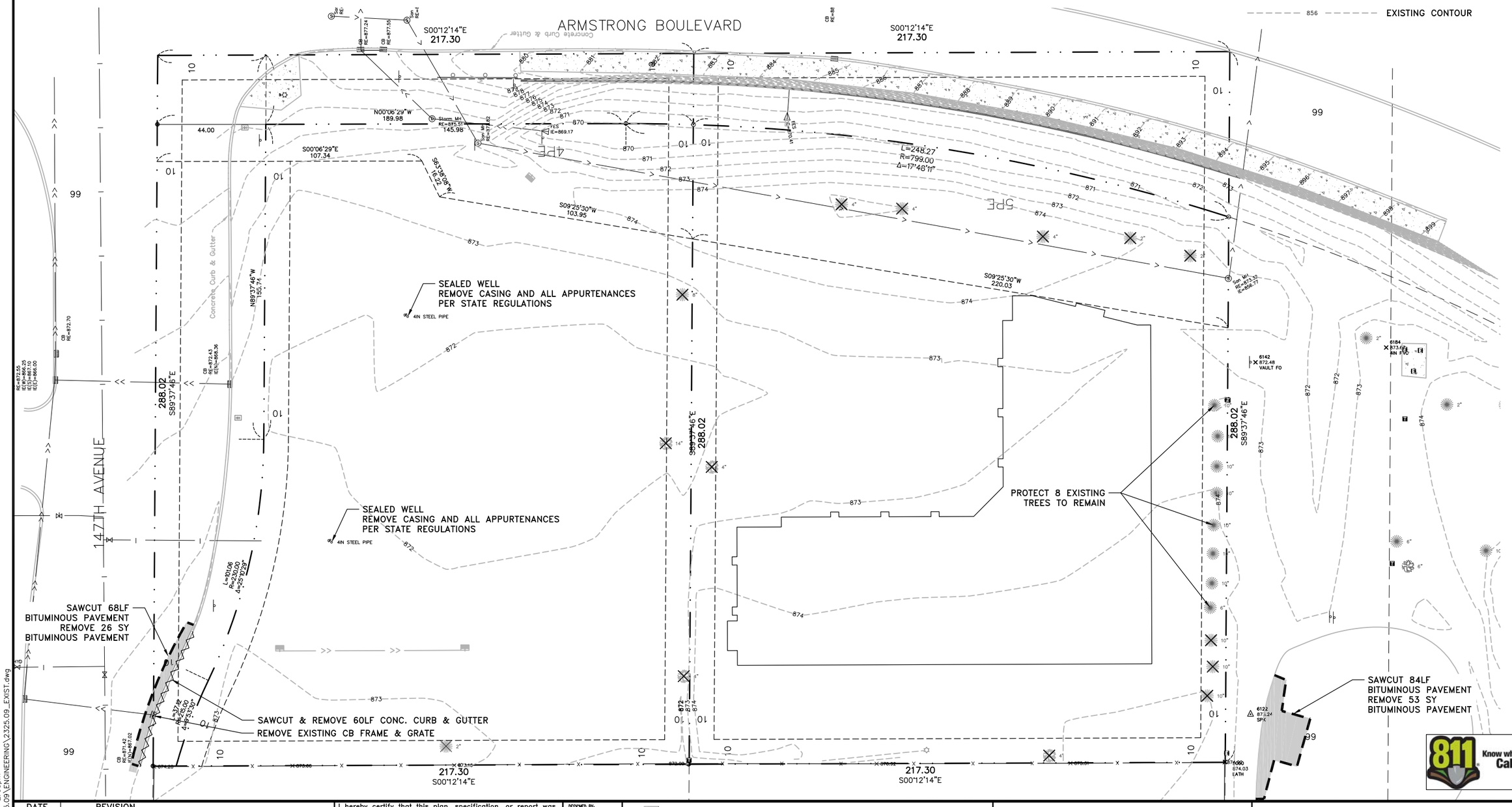
GENERAL NOTES:

1. CONTRACTOR SHALL INSTALL ALL PERIMETER EROSION AND SEDIMENT CONTROLS AS DETAILED ON SHEET 6 PRIOR TO ANY REMOVAL OR LAND DISTURBING ACTIVITIES.
2. CONTRACTOR SHALL COMPLETELY REMOVE ALL ITEMS MARKED FOR REMOVAL AND DISPOSE OF OFFSITE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
3. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING SITE IMPROVEMENTS NOTED TO REMAIN.
4. CONTRACTOR SHALL END ALL PAVEMENT, CURB, AND SIDEWALK REMOVALS WITH A FULL DEPTH SAWCUT SUCH THAT A CLEAN EDGE REMAINS FOR NEW WORK TO MATCH.
5. CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE CITY OF RAMSEY PRIOR TO WORK WITHIN 147TH AVENUE.

LEGEND

- REMOVE BITUMINOUS PAVEMENT
- REMOVE TREE
- REMOVE CONCRETE CURB
- FULL DEPTH SAWCUT
- 856 EXISTING CONTOUR

SCALE 20 0 20 40 IN FT.



811 Know what's below. Call before you dig.

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

SHANE M. NELSON, P.E.
Date 5/9/19 Lic. No. 43381

DESIGNED BY: AMT
DRAWN BY: AMT
CHECKED BY: SMN

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

WEST ARMSTRONG RETAIL

EXISTING CONDITIONS & REMOVALS PLAN

CITY OF RAMSEY, MINNESOTA

SHEET 5 OF 12 SHEETS

2325.09

May 24, 2019 - 2:03pm
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GENERAL NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FINISHED GRADE OF GUTTER LINE, CONCRETE WALK OR BITUMINOUS PAVEMENT, UNLESS OTHERWISE NOTED. TOP OF CURB ELEVATIONS DENOTED BY "TC".
2. MAXIMUM PAVED SLOPES SHALL NOT EXCEED 12:1. MAXIMUM SLOPES IN GREEN SPACE SHALL NOT EXCEED 4:1 EXCEPT AS NOTED WITHIN STORMWATER BASINS.

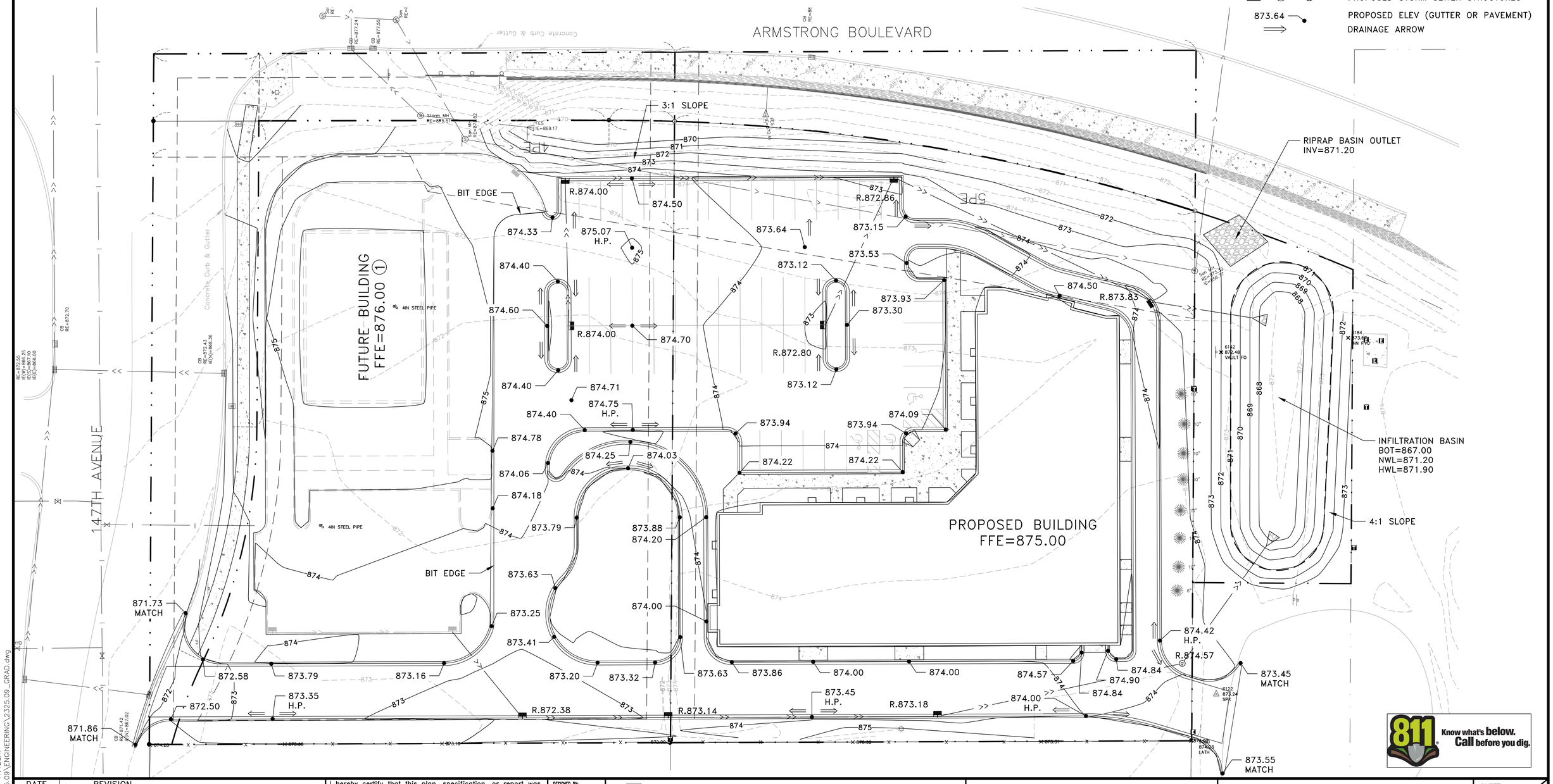
REFERENCE NOTES:

① FUTURE BUILDING PAD AND PARKING AREA SHALL BE GRADED WITH A 1 FOOT HOLDDOWN.

20 0 20 40
SCALE IN FT.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING GAS
- EXISTING TELEPHONE
- EXISTING OVERHEAD UTILITY
- EXISTING UNDERGROUND ELECTRIC
- PROPOSED STORM SEWER
- PROPOSED STORM SEWER STRUCTURES
- 873.64 PROPOSED ELEV (GUTTER OR PAVEMENT)
- DRAINAGE ARROW



DATE	REVISION
5/24/19	CITY SUBMITTAL SET
6/5/19	REVISED BASIN HWL PER WATERSHED COMMENT

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SHANE M. NELSON, P.E.
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WEST ARMSTRONG RETAIL

GRADING & DRAINAGE PLAN
CITY OF RAMSEY, MINNESOTA

SHEET 7 OF 12 SHEETS

2325.09

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REQUIRED PLANT MATERIALS

PARCEL B = 918 L.F. = 918/50 = 18.4 TREES
RETAIL BLDG. = 15,155 S.F. = 15,155/1000 = 15.2 TREES

PARCEL B = 918 L.F. = 918/30 = 30.6 SHRUBS
RETAIL BLDG. = 15,155 S.F. = 15,155/300 = 50.5 SHRUBS

TOTAL REQUIRED = 18 TREES & 31 SHRUBS

TOTAL PROVIDED = 21 TREES & 110 SHRUBS

PLANT LIST: Site Plantings

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE/ROOT	
TREES					
4	CH	Celtis occidentalis	Common Hackberry	2–1/2"	B&B
5	SH	Gleditsia triacanthos inermis 'Skycole'	Skyline Honeylocust	2–1/2"	B&B
10	BHS	Picea glauca densata	Black Hills Spruce	6'–0"	B&B
2	AP	Pinus nigra	Austrian Pine	6'–0"	B&B
21	TREES			1–1/2"	B&B
SHRUBS					
1	ISL	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Lilac	7 Gal.	Pot
5	JTL	Syringa reticulata	Japanese Tree Lilac	7 Gal.	Pot
14	DWE	Euonymus alatus 'Compacta'	Dwarf Winged Euonymus	5 Gal.	Pot
42	GFS	Spiraea x bumalda 'Gold Flame'	Gold Flame Spirea	2 Gal.	Pot
18	CL	Syringa vulgaris	Common Lilac	5 Gal.	Pot
16	SJ	Juniperus sabina 'Scandia'	Scandia Juniper	5 Gal.	Pot
14	HMA	Thuja occidentalis 'Hetz Midget'	Hetz Midget Arborvitae	5 Gal.	Pot
110	SHRUBS				
PERENNIALS & GRASSES					
90	BD	Hemerocallis 'Baja'	Baja Daylily	1 Gal.	Pot
48	KFG	Calamagrostis acutiflora 'Karl Forester'	Karl Forester Feather Reed Grass	1 Gal.	Pot
138	PLANTS				

SOD & SEED

Sod, placed 6' behind all curbed areas.
Sod shall be seed grown and drought tolerant. Prior to installation, the Contractor shall supply a sample of the sod for approval by the Owner. Check with the following vendors for availability.

- Speciality Turf and Ag
- Anoka Turf Farm
- A & L Sod
- Central Turf Farm

Seed areas noted on the plan. The suggested seed mixture shall be approved by the Owner and and the City prior to installation. The Contractor shall also supply all tags from the installed seed bags, with a written letter stating the rate of application, any soil preparations, any soil amendments, and any annual cover seed to be used to help prevent erosion.

Commercial Turf Lawn Mix MnDOT 25–131
Short Dry Native Prairie Mix MnDOT 35–221
Wet Native Stormwater Mix MnDOT 33–261
Erosion Control Stabilization Mix MnDOT 22–112

PLANTING NOTES:

Contractor shall call and verify locations with all utilities prior to any digging or installation of plants.

Contractor shall provide a two year guarantee of all plant materials. The guarantee begins on the date of the Owner's written acceptance of the initial planting. Replacement plant materials shall have a one year guarantee commencing upon planting. Owner is responsible for maintenance after all is accepted by the Owner.

All plants to be northern–grown and hardy. Plants to be installed as per standard AAN planting practices.

All landscaping and sod areas shall be irrigated with an in ground system. The system shall have water efficient technology, such as a smart controller and/or soil moisture sensors.

Use minimum 12" loam planting soil on trees and 6" on shrubs.

Staking of trees optional; reposition if not plumb after one year.

Wrap all smooth–barked trees–fasten top and bottom. Remove by April 1.

Remove burlap, twine, rope, and wire from top of BB materials; remove pot on potted plants; split and break apart peat pots.

Prune only dead and damages branches on plants as necessary. All pruning shall be made just outside of branch collar area.

All boulevard trees shall have the lowest branches begin no less than six feet above final grade.

Plants shall be immediately planted upon arrival at site. Properly heel–in materials if necessary.

All disturbed areas to be sodded unless otherwise noted. Sod shall be drought tolerant.

Planting beds for shrubs shall have (4 oz. min.) weed barrier fabric, 4" – 5" of washed River Rock mulch or 4" –5" dark brown double shredded hardwood mulch and 4" vertical (commercial grade) black poly edging (where mulch is not contained by the building and sidewalk or curb. It is to be placed and staked in straight lines as shown on the plan.

Topsoil shall be a minimum of 4 inches deep. Topsoil shall consist of a pulverized black dirt with no more than 35% sand content.

Double shredded dark brown hardwood mulch 4" deep shall be provided around all installed trees.

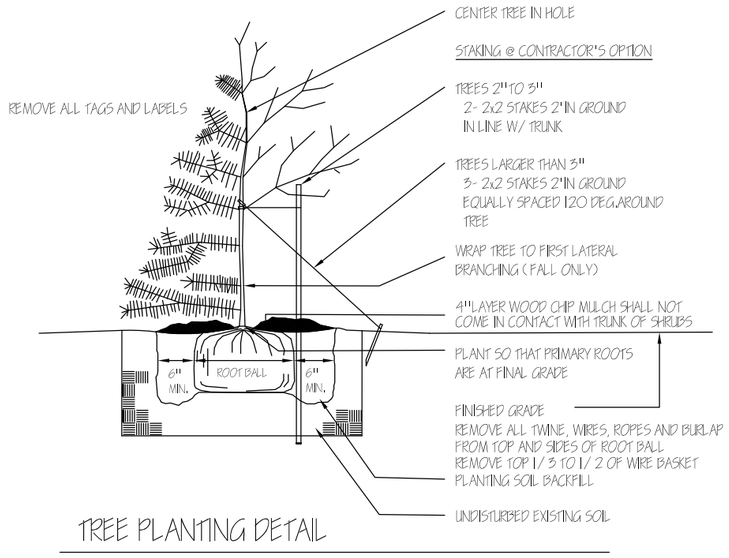
Retaining walls are not the responsibility of the Landscape Architect. Contact the Project Engineer for details, locations, materials, and specifications for all retaining walls.

Shrub sizes shall be a minimum of 24 inches in height or width at time of planting.

THE PLANTING BED ADJACENT TO THE BUILDING SHALL BE ADJUSTED IF NECESSARY TO FIT WITH THE BUILDING'S ARCHITECTURE SUCH AS WINDOW PATTERNS AND EXTERIOR WALL MATERIALS. IF THERE ARE ANY QUESTIONS OR CONCERNS, CONTACT THE OWNER PRIOR TO ANY PLANT INSTALLATION.

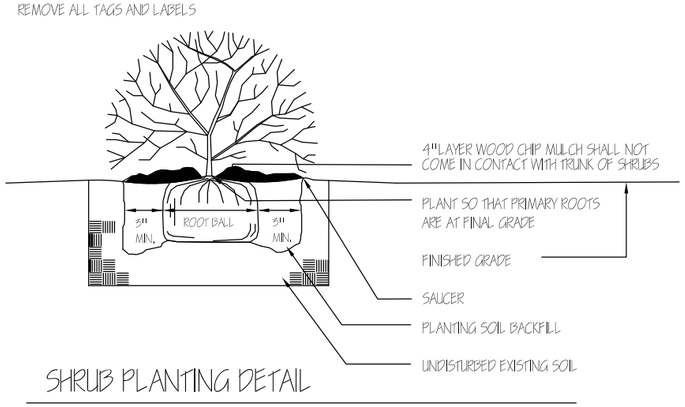
THE CITY REQUIRES A PRE–PLANTING MEETING WITH THE LANDSCAPE CONTRACTOR FOR ALL PLANTINGS WITHIN THE PUBLIC RIGHT–OF–WAY.

ANY DEVIATION FROM THE FINAL PLANT LIST REQUIRES APPROVAL OF CITY PRIOR TO INSTALLATION.



TREE PLANTING DETAIL

No Scale



SHRUB PLANTING DETAIL

No Scale

BRODSHO CONSULTING
Landscape Architecture Site Planning
698 NORTHBRIDGE COURT
EAGAN, MN 55123
PHONE: 651–688–8023
FAX: 651–456–5748

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly licensed Landscape Architect under the laws of the State of Minnesota.

Debra Brodsho

REG. NO. 23849 DATE 05–21–19

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763–427–5860 FAX 763–427–0520
www.hakanson–anderson.com

WEST ARMSTRONG RETAIL

LANDSCAPE SCHEDULE & DETAILS

CITY OF RAMSEY, MINNESOTA

SHEET 12 OF 12 SHEETS

2325.09

May 24, 2019 – 2:05pm
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SOD

MNDOT SEED MIX 25-131

MNDOT SEED MIX 33-262

MNDOT SEED MIX 22-111

BRODSHO CONSULTING
Landscape Architecture Site Planning

698 NORTHBRIDGE COURT
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Debra Brodsho

REG. NO. 23849 DATE 05-21-19

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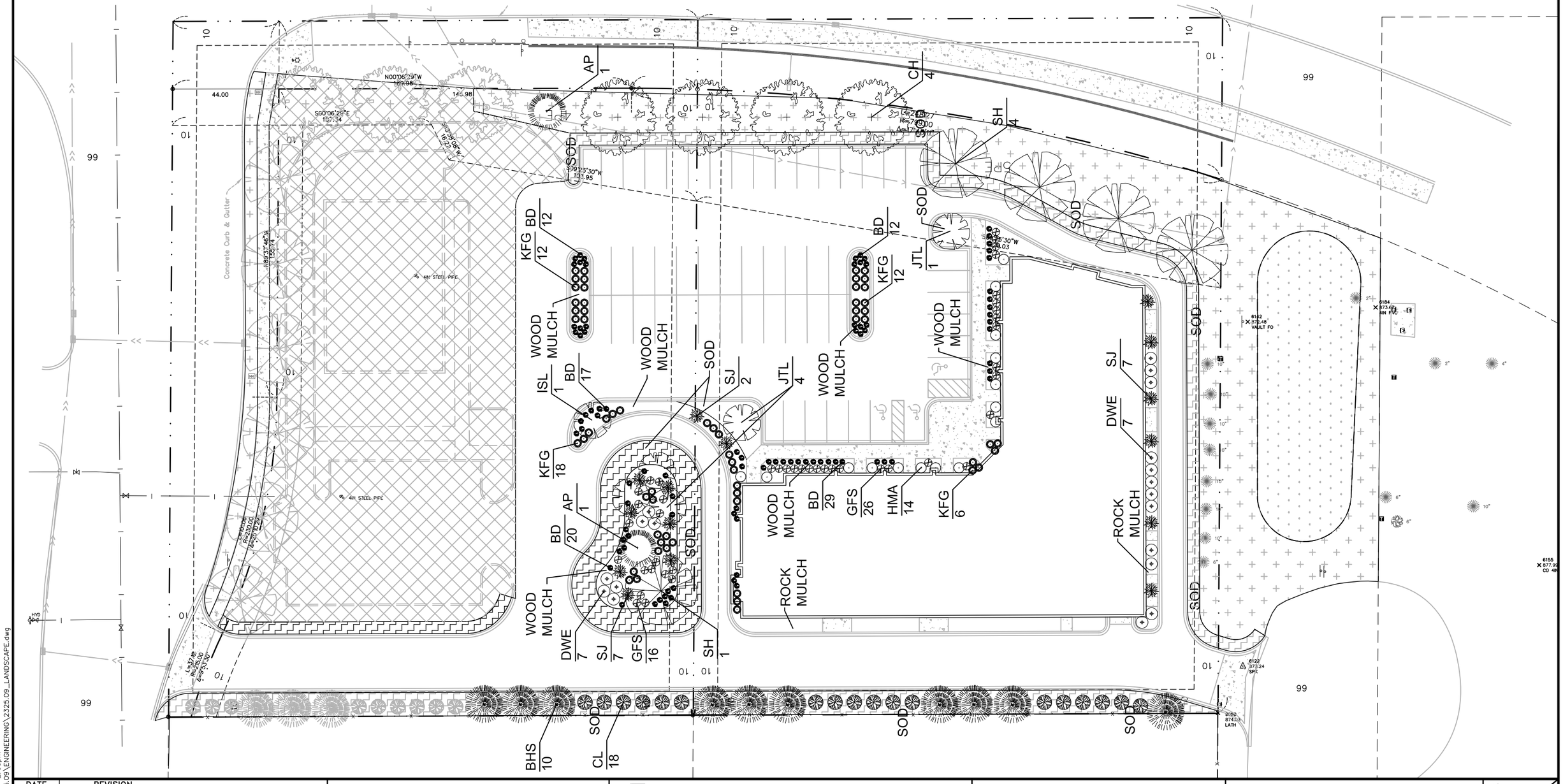

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

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WEST ARMSTRONG RETAIL

LANDSCAPE PLAN

CITY OF RAMSEY, MINNESOTA

SHEET 11 OF 12 SHEETS

2325.09

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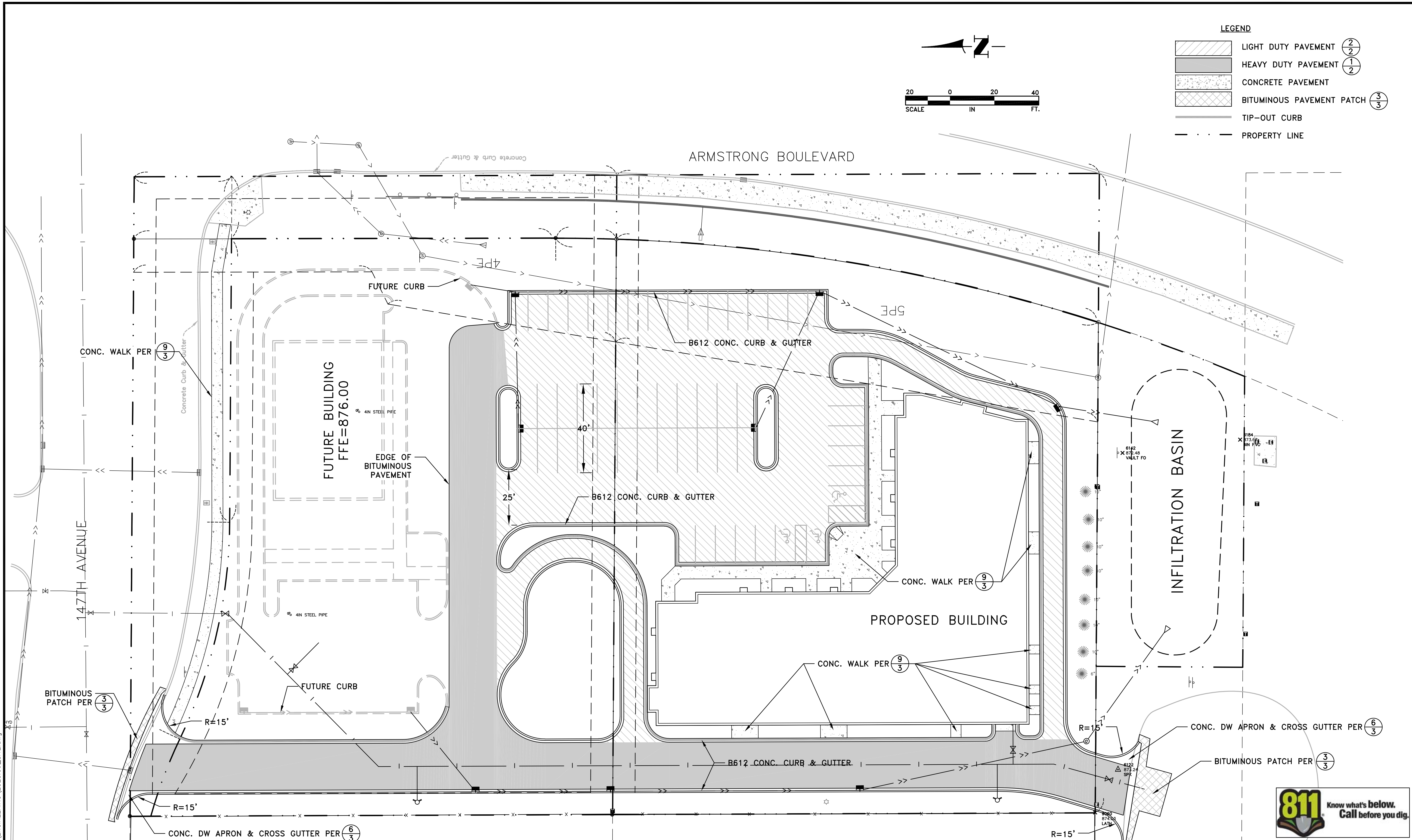
LEGEND
LIGHT DUTY PAVEMENT 2/2
HEAVY DUTY PAVEMENT 1/2
CONCRETE PAVEMENT
BITUMINOUS PAVEMENT PATCH 3/3
TIP-OUT CURB
PROPERTY LINE
SCALE IN FT.
20 0 20 40
ARMSTRONG BOULEVARD
147TH AVENUE
FUTURE BUILDING FFE=876.00
PROPOSED BUILDING
INFILTRATION BASIN
FUTURE CURB
B612 CONC. CURB & GUTTER
CONC. WALK PER 9/3
EDGE OF BITUMINOUS PAVEMENT
40'
25'
R=15'
BITUMINOUS PATCH PER 3/3
CONC. DW APRON & CROSS GUTTER PER 6/3
Concrete Curb & Gutter
4IN STEEL PIPE
4PE
5PE
811 Know what's below. Call before you dig.

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

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SHANE M. NELSON, P.E.
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DRAWN BY: AMT
CHECKED BY: SMN

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WEST ARMSTRONG RETAIL

SITE PAVING PLAN

CITY OF RAMSEY, MINNESOTA

SHEET 6 OF 12 SHEETS

2325.09

May 24, 2019 - 2:03pm
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SWPPP NARRATIVE:
THE CONTRACTOR AND OWNER MUST APPLY FOR PERMIT COVERAGE UNDER THE GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY AS REQUIRED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PHASE II PROGRAM. COVERAGE WILL BEGIN 7 DAYS AFTER ONLINE SUBMISSION OF THE PERMIT APPLICATION.

THIS SWPPP INCLUDES BOTH PERMANENT AND TEMPORARY BEST MANAGEMENT PRACTICES (BMPs). THE LOCATION AND TYPE OF BMPs ARE DEPICTED ON THE GRADING, DRAINAGE AND EROSION CONTROL PLAN. CONSTRUCT ALL BMPs IN ACCORDANCE WITH THE APPLICABLE DETAILS IN THESE PLANS AND THE MNDOT EROSION CONTROL HANDBOOK.

DISCHARGE OF ANY MATERIAL OTHER THAN STORMWATER OR DISCHARGES ASSOCIATED WITH DEWATERING FROM THE SITE ARE PROHIBITED.

THIS SWPPP IS NOT DESIGNED FOR DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY. PERMITTEES MUST OBTAIN COVERAGE FOR DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES UNDER A SEPARATE NPDES PERMIT AFTER DAY TO DAY OPERATION ACTIVITIES COMMENCE EVEN IF CONSTRUCTION IS ONGOING.

PERMITTEES MUST SUBMIT A NOTIFICATION OF TERMINATION (NOT) WITHIN 30 DAYS OF TERMINATION OF PROJECT AND AFTER FINAL STABILIZATION HAS BEEN APPROVED BY THE CITY OF RAMSEY.

PROJECT CONTACTS:

DESCRIPTION	COMPANY	CONTACT PERSON	PHONE
OWNER	PSD, LLC	MATT KUKER	763-427-5955
CONTRACTOR	TBD	TBD	TBD
SWPPP DESIGNER	HAKANSON ANDERSON	ADAM THIELE	763-427-5860

ANTICIPATED CONSTRUCTION SEQUENCE:
1. PERIMETER SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITIES
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE
3. CLEAR AND GRUB
4. CONSTRUCT GRADING, UTILITIES, BUILDING AND PARKING AREA
5. STABILIZE ALL UPGRADIENT AREAS
6. CONSTRUCT INFILTRATION BASIN
7. STABILIZE INFILTRATION BASIN

PROJECT INFORMATION:

DISTURBED AREA (ACRES)	2.5200
EXISTING IMPERVIOUS SURFACE (ACRES)	1.7500
PROPOSED IMPERVIOUS SURFACE (ACRES)	1.6400
PLANNED CONSTRUCTION START DATE	7/1/2019
ESTIMATED CONSTRUCTION COMPLETION DATE	11/1/2019
COUNTY	ANOKA
LATTITUE	45.2369
LONGITUDE	-93.4710

TEMPORARY SEDIMENT BASINS:
TEMPORARY SEDIMENT BASINS ARE REQUIRED WHERE 10 OR MORE ACRES DRAIN TO A COMMON LOCATION. TEMPORARY SEDIMENT BASINS MUST HAVE A LIVE STORAGE FOR A 2 YEAR, 24 HOUR STORM EVENT OR 1800 CUBIC FEET PER ACRE DRAINED.

MORE THAN 10 ACRES OF DISTURBED AREA DRAINING TO COMMON LOCATION	NO
TEMPORARY SEDIMENT BASIN REQUIRED	NO
VOLUME REQ'D BASED ON 2-YEAR STORM OR 1800 CF / ACRE	NOT APPLICABLE

TIMING OF EROSION CONTROL:
1. RIP RAP AND FILTER BLANKET TO BE INSTALLED WITHIN 24 HOURS OF THE OUTLET PLACEMENT
2. THE CONTRACTOR MUST STABILIZE ALL EXPOSED SOIL IMMEDIATELY TO LIMIT SOIL EROSION WHEN CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
3. ADJACENT TO SURFACE WATERS, STABILIZE THE NORMAL WETTED PERIMETER OF THE LAST 200 LINEAL FEET OF PERMANENT OR TEMPORARY DRAINAGE DITCHES OR SWALES WITHIN 24 HOURS.
4. DURING FISH SPAWNING TIME FRAMES, STABILIZE ALL EXPOSED AREAS WITHIN 200 FEET OF THE WATERS EDGE WITHIN 24 HOURS IF WITHIN THE RESTRICTION PERIOD.

PERMANENT STORMWATER MANAGEMENT:
THE FOLLOWING PERMANENT STOMWATER MANAGEMENT BMPs WILL BE CONSTRUCTED WITH THIS PROJECT. THE STORMWATER MANAGEMENT PLAN FOR THIS PROJECT IS INCORPORATED BY REFERENCE.

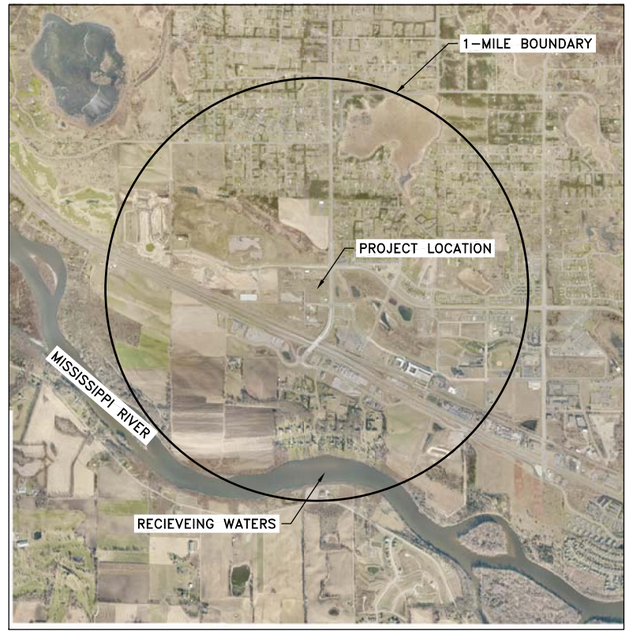
INFILTRATION BASIN	X
FILTRATION BASIN	
WET SEDIMENTATION BASIN	
REGIONAL BASIN	
HYDRODYNAMIC DEVICE	

ESTIMATED QUANTITIES:

PERIMETER SEDIMENT CONTROL:SILT FENCE, BIO LOGS	1410	LIN FEET
STOM DRAIN INLET PROTECTION	11	EACH
STABILIZED CONSTRUCTION EXIT	1	EACH
WOOD FIBER BLANKET	175	SQUARE YARDS

INSPECTIONS AND MAINTENANCE:
1. PERMITTEE MUST PROVIDE A TRAINED PERSON TO INSPECT THE SITE ONCE EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAT ½ INCH IN 24 HOURS.
2. DURING EACH INSPECTION, INSPECT CONSTRUCTION SITE EXIT LOCATIONS AND REMOVE ACCUMULATED SEDIMENT WITHIN 1 CALENDAR DAY OF DISCOVERY.
3. DURING EACH INSPECTION, INSPECT SILT FENCE AND BIO LOGS AND PERFORM MAINTENANCE IF THEY ARE NON-FUNCTIONAL OR WHEN SEDIMENT REACHES ½ THE HEIGHT OF THE DEVICE.
4. DRAIN AND REMOVE SEDIMENT FROM SEDIMENT BASINS WHEN SEDIMENT COLLECTED REACHES ½ THE STORAGE VOLUME.
5. INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES, FOR SEDIMENT DEPOSITION. IF NECESSARY, OBTAIN APPROVALS FOR REMOVING DELTAS FROM SURFACE WATERS AND REMOVE SEDIMENT AND STABILIZE WITHIN 7 CALENDAR DAYS OF DISCOVERY.

DOCUMENT RETENTION:
1. THIS SWPPP SHALL REMAIN ON THE PROJECT SITE AT ALL TIMES.
2. MAINTAIN RECORDS OF INSPECTIONS, INCLUDING TIME AND DATE.
3. NAME OF PERSONS CONDUCTING INSPECTIONS.
4. ACCURATE FINDING OF INSPECTIONS.
5. CORRECTIVE ACTIONS TAKEN.
6. DATE OF ALL RAINFALLS GREATER THAN ½ INCH IN 24 HOURS, INCLUDING AMOUNT OF RAINFALL IN EACH EVENT.
7. DESCRIPTION OF ANY DISCHARGE DISCOVERED DURING INSPECTIONS.
8. ANY AMENDMENTS NECESSARY TO THE SWPPP.



SWPPP PREPARER INFORMATION:

ADAM THIELE

UNIVERSITY OF MINNESOTA

DESIGN OF CONSTRUCTION SWPPP

RECEIVING WATERS:
A SUMMARY OF RECEIVING WATERS THAT ARE IDENTIFIED ON THE USGS 7.5 MIN QUAD MAPS AND ARE WITHIN 1 MILE OF THE PROJECT BOUNDARY ARE AS FOLLOWS:

NAME OF WATERBODY	TYPE	SPECIAL WATER	IMPAIRED WATER WITHIN 1 MILE	TYPE OF IMPAIRMENT
MISSISSIPPI RIVER	RIVER	YES	YES	MERCURY

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

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SHANE M. NELSON, P.E.
Date 5/9/19 Lic. No. 43381

DESIGNED BY: AMT
DRAWN BY: AMT
CHECKED BY: SMN

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WEST ARMSTRONG RETAIL

STORM WATER POLLUTION PREVENTION PLAN
CITY OF RAMSEY, MINNESOTA

SHEET 10 OF 12 SHEETS

2325.09

May 24, 2019 - 2:05pm
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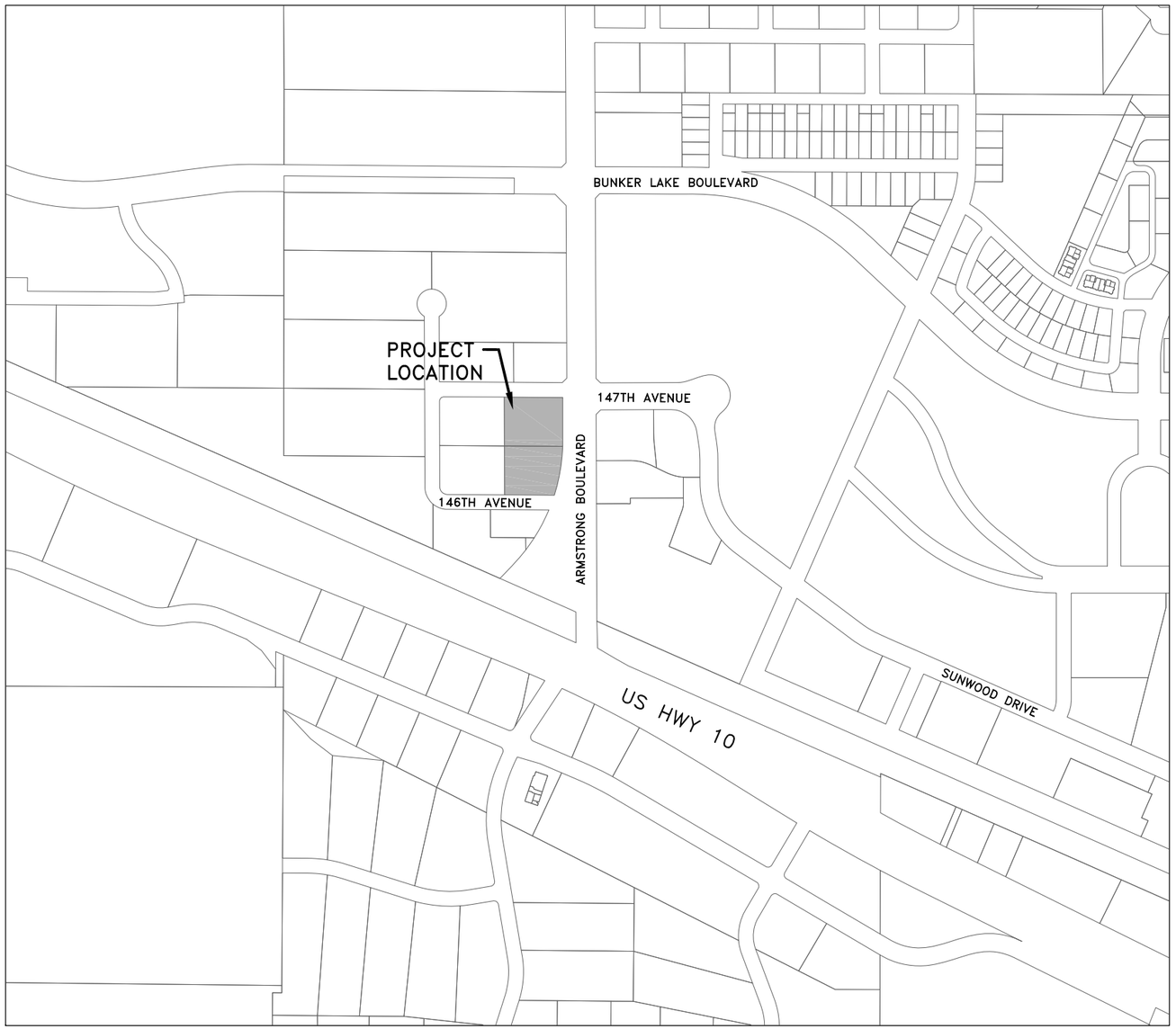
WEST ARMSTRONG RETAIL
CIVIL SITE CONSTRUCTION PLANS
CITY OF RAMSEY, MINNESOTA



OWNER/DEVELOPER
PSD, LLC
7355 SUNWOOD DRIVE, SUITE 315
RAMSEY, MN 55303
MATT KUKER
matt.kuker@psdlanddevelopment.com
763-427-5955

ENGINEER/SURVEYOR
HAKANSON ANDERSON
3601 THURSTON AVENUE
ANOKA, MN 55303
SHANE M. NELSON, P.E.
shanen@haa-inc.com
BRIAN PERSON, P.L.S.
brian@haa-inc.com
763-427-5860

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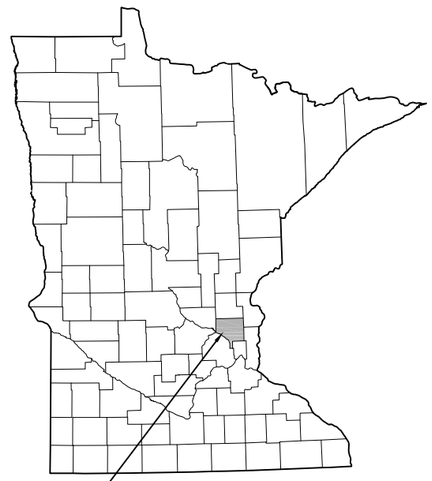

CITY OF RAMSEY,
ANOKA COUNTY,
MINNESOTA

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" 2013 EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD SPECIFICATIONS SHALL APPLY.

ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

SHEET INDEX

THIS PLAN CONTAINS 12 SHEETS

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SHANE M. NELSON, P.E.
HAKANSON ANDERSON
DESIGN ENGINEER

43381
LIC. NO.

DATE 5/9/19

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520

REFERENCE NOTES:
① INSULATE WATERMAIN/STORM SEWER/SANITARY SEWER CROSSING
② INSTALL 12" PVC CAP ON STORM SEWER STUB

GENERAL NOTES:
1. STORM SEWER PIPE SHALL BE PVC SCH 40 (ASTM D2729) OR APPROVED EQUAL.
2. WATERMAIN AND WATER SERVICE PIPE SHALL BE DIP CLASS 52.
3. SANITARY SEWER PIPE SHALL BE PVC SDR 35.
4. PROVIDE MIN. 7.5' COVER OVER WATERMAIN AND WATER SERVICES.

LEGEND
- EXISTING WATERMAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING GAS
- EXISTING TELEPHONE
- EXISTING OVERHEAD UTILITY
- EXISTING UNDERGROUND ELECTRIC
- PROPOSED WATERMAIN
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED STORM SEWER STRUCTURES

CB-411A (FUTURE)
RIM=874.09
INV (S)=869.70

Storm MH RE=875.51 145.98

N00°06'29"W 189.98

44.00

S00°06'29"E 107.34

S63°38'09"E 16.12

6" PVC SAN (FUTURE)

20LF 12" PVC @ 1.00%

EX. 24" PVC SAN

137LF 15" PVC @ 0.51%

CBMH-411
RIM=874.05
INV (N)=869.50
INV (W)=869.50
INV (S)=869.50

S09°25'30"W 102.95

62LF 12" PVC @ 0.81%

CB-410
RIM=874.00
INV (E)=870.00

CBMH-412
RIM=872.87
INV (N)=868.80
INV (NW)=868.80
INV (SW)=868.80

68LF 12" PVC @ 0.59%

CB-412A
RIM=872.80
INV (SE)=869.20

L=248.27
R=799.00
Δ=17°48'11"

CONNECT TO EXISTING SAN PIPE PER 4/4

120LF 18" PVC @ 0.50%

CBMH-413
RIM=873.83
INV (NE)=868.20
INV (S)=868.20
SUMP=865.20

S09°25'30"W 220.03

45LF 18" PVC @ 0.45%

FES-414
INV=868.00

6" PVC SAN

CONNECT TO BUILDING PLUMBING (SEE BUILDING PLUMBING PLANS)

INFILTRATION BASIN

FES-406
INV=868.00

631LF 18" PVC @ 0.55%

CBMH-405
RIM=874.28
INV (N)=868.35
INV (SE)=868.35
SUMP=865.35

6" DIP PLUG RODDED W/ REACTION BLOCKING

6" GV & BOX

6" DIP 45° BEND

CONNECT TO EXISTING WM STUB 6" GV & BOX

6" DIP WM (FUTURE)

6" DIP PLUG RODDED W/ REACTION BLOCKING

6" DIP TEE 6" GV & BOX 20LF 6" DIP WM

CBMH-402 (FUTURE)
RIM=873.31
INV (N)=870.02
INV (SW)=870.02

75LF 12" PVC (FUTURE) @ 0.51%

46LF 12" PVC @ 0.50%

CB-401 (FUTURE)
RIM=873.30
INV (S)=870.40

CB-402A
RIM=872.38
INV (NE)=869.79
INV (S)=869.79

CBMH-403
RIM=873.13
INV (N)=869.48
INV (S)=869.48

6" DIP WM

61LF 15" PVC @ 0.51%

112LF 15" PVC @ 0.52%

104LF 18" PVC @ 0.53%

6" DIP 45° BEND

HYDRANT
6" DIP TEE
6" GV & BOX
15LF 6" DIP WM

FURNISH & INSTALL R-3205 FRAME & GRATE ON EXISTING STRUCTURE

CBMH-404
RIM=873.17
INV (N)=868.90
INV (S)=868.90

HYDRANT
6" DIP TEE
6" GV & BOX
15LF 6" DIP WM

6" DIP 22.5° BEND

CONNECT TO BUILDING PLUMBING (SEE BUILDING PLUMBING PLANS)

6" DIP TEE
6" GV & BOX
18LF 6" DIP WM

6" DIP PLUG RODDED W/ REACTION BLOCKING

6" GV & BOX

SCALE 20 0 20 40 IN FT.

DATE	REVISION
5/24/19	CITY SUBMITTAL SET

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

SHANE M. NELSON, P.E.
Date 5/9/19 Lic. No. 43381

DESIGNED BY: AMT
DRAWN BY: AMT
CHECKED BY: SMN

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WEST ARMSTRONG RETAIL

UTILITY PLAN

CITY OF RAMSEY, MINNESOTA

SHEET 9 OF 12 SHEETS

2325.09

Jun 06, 2019 - 10:26am
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