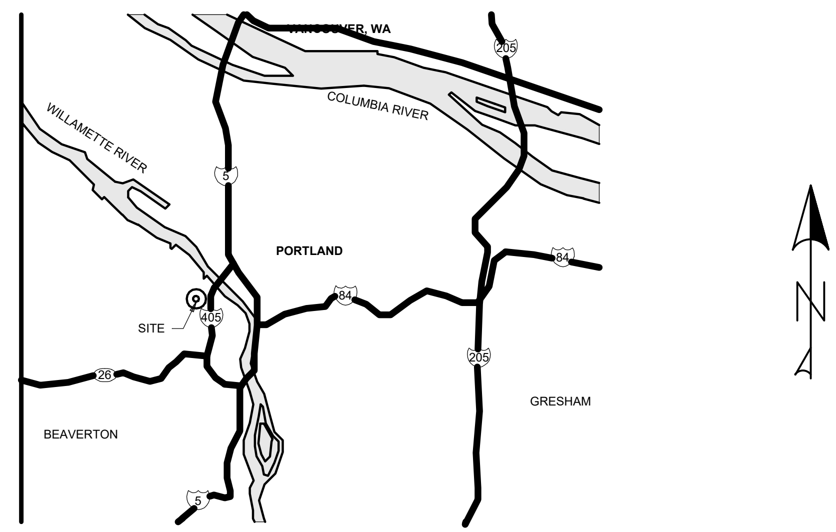
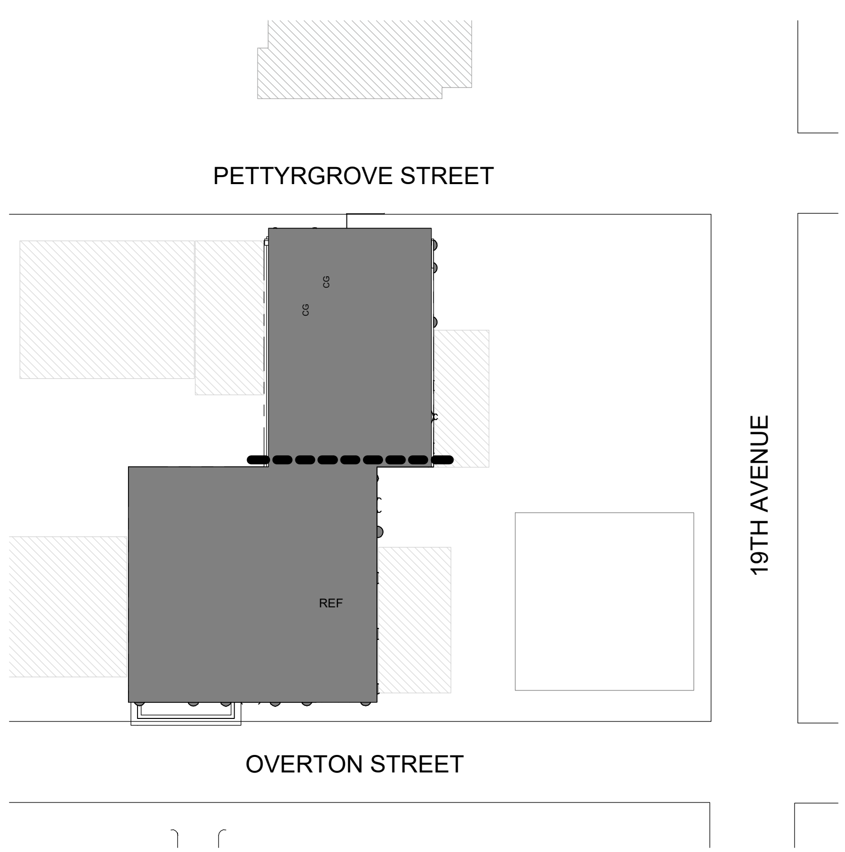
OVERTON STREET DEVELOPMENT



VICINITY MAP
NOT TO SCALE



SITE AREA MAP
NOT TO SCALE

RENDER COURTESY MACKENZIE

PROJECT CONTACTS:

OWNER

101 S MAIN AVENUE, SUITE 302
SOUIX FALLS, SD 57104
PHONE:
CONTACT:
EMAIL:

ARCHITECT:

MACKENZIE

1515 SE WATER AVENUE, #100
PORTLAND OREGON, 97214
PHONE: 503-224-9560
CONTACT: EMMA SURVIS
EMAIL: esurvis@mcknze.com

STRUCTURAL ENGINEERS:

TWENZ ENGINEERING INC.
1500 SW JEFFERSON WAY
CORVALLIS, OREGON 97331

PHONE: 541-990-2909
CONTACT: ZACHARY NEWTON
EMAIL: NEWTONZ@OREGONSTATE.EDU

PHONE: 218-452-1956
CONTACT: THANH HUYNH
EMAIL: HUYNHT@OREGONSTATE.EDU

PHONE: 541-778-5126
CONTACT: WILLIAM MURAVOIR
EMAIL: MURAVOIW@OREGONSTATE.EDU

WATER RESOURCE ENGINEERS:

TWENZ ENGINEERING INC.
1500 SW JEFFERSON WAY
CORVALLIS, OREGON 97331

PHONE: 971-303-2474
CONTACT: NICOTA LIESY
EMAIL: LIESYN@OREGONSTATE.EDU

PHONE: 503-853-1639
CONTACT: EPHRAIM PECHINPAH
EMAIL: PECKINPE@OREGONSTATE.EDU

Designed	ZACHARY NEWTON	2/7/2022
Drawn	NICOTA LIESY	2/12/2022
Checked	ZACHARY NEWTON	2/25/2022
Assignment	GROUP DESIGN DRAWINGS	
Submittal Date	05/015/2022	

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

COVER SHEET

Class:
CE 419
CAPSTONE II

G0.0

Scale AS SHOWN
Sheet 1 of 23

Sheet Index

GENERAL

STRUCTURAL

WATER RESOURCE

Designed ZACHARY NEWTON 2/7/2022
Drawn THANH HUYNH 2/13/2022
Checked THANH HUYNH 05/15/2022

Assignment GROUP DESIGN DRAWINGS
Submittal Date 05/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

INDEX

Class:
CE 419
CAPSTONE II

G1.0

Scale AS SHOWN

LEGEND

	PROPOSED	EXISTING
FIREHYDRANT		
WATER METER		
WATER VALVE		
SANITARY SEWER CLEANOUT		
COMBINED SEWER MANHOLE		
SIGN		
STORM SEWER CATCH BASIN		
STORM SEWER AREA DRAIN		
GAS METER		
GAS VALVE		
GUY WIRE ANCHOR		
POWER POLE		
POWERVAULT		P
STREET TREE		
RIGHT-OF-WAY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
EASEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE	PWR	PWR
OVERHEAD WIRE	OHW	OHW
GAS LINE	GAS	GAS
STORM SEWER LINE	STM	STM
SANITARY SEWER LINE		SAN
COMBINED SEWER LINE		CS
WATER LINE		WAT
CONCRETE SIDEWALK		
PROPOSED SUBGRADE WATER MITIGATION SYSTEM		

Designed	ZACHARY NEWTON	2/7/2022
Drawn	WILLIAM MURAVIOR	2/25/2022
Checked	THANH HUYNH	05/15/2022
Assignment	GROUP DESIGN DRAWINGS	
Submittal Date	05/15/2022	

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

LEGEND & SYMBOLS

Class:
CE 419
CAPSTONE II

G2.0

Scale AS SHOWN
Sheet 3 of 23

GENERAL PROJECT NOTES

STRUCTURAL DESIGN NOTES:

STRUCTURE DESIGNED IN ACCORDANCE TO THE FOLLOWING 2014 OSSC (INFORMATION STILL NEEDED).

ROOF DEAD LOADS:

GREEN ROOF (TOTAL DESIGN) =25 PSF

ROOF LIVE LOADS: (INFORMATION STILL NEEDED)

SNOW LOAD = 25 PSF

WIND LOADS:

(INFORMATION STILL NEEDED)

EXPOSURE

SEISMIC DESIGN DATA:

(INFORMATION STILL NEEDED)

STRUCTURAL STEEL NOTES :

(INFORMATION STILL NEEDED)

WOOD DESIGN NOTES :

(INFORMATION STILL NEEDED)

CONCRETE NOTES:

(INFORMATION STILL NEEDED)

SOIL NOTES:

(INFORMATION STILL NEEDED)

GREEN ROOF DETAIL NOTES:

(INFORMATION STILL NEEDED)

UNDERGROUND WATER RETENTION DESIGN NOTES:

(INFORMATION STILL NEEDED)

Designed ZACHARY NEWTON 2/7/2022
Drawn EPHRAIM PECKINPAH 2/13/2022
Checked THANH HUYNH 05/15/2022
Assignment GROUP DESIGN DRAWINGS
Submittal Date 05/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

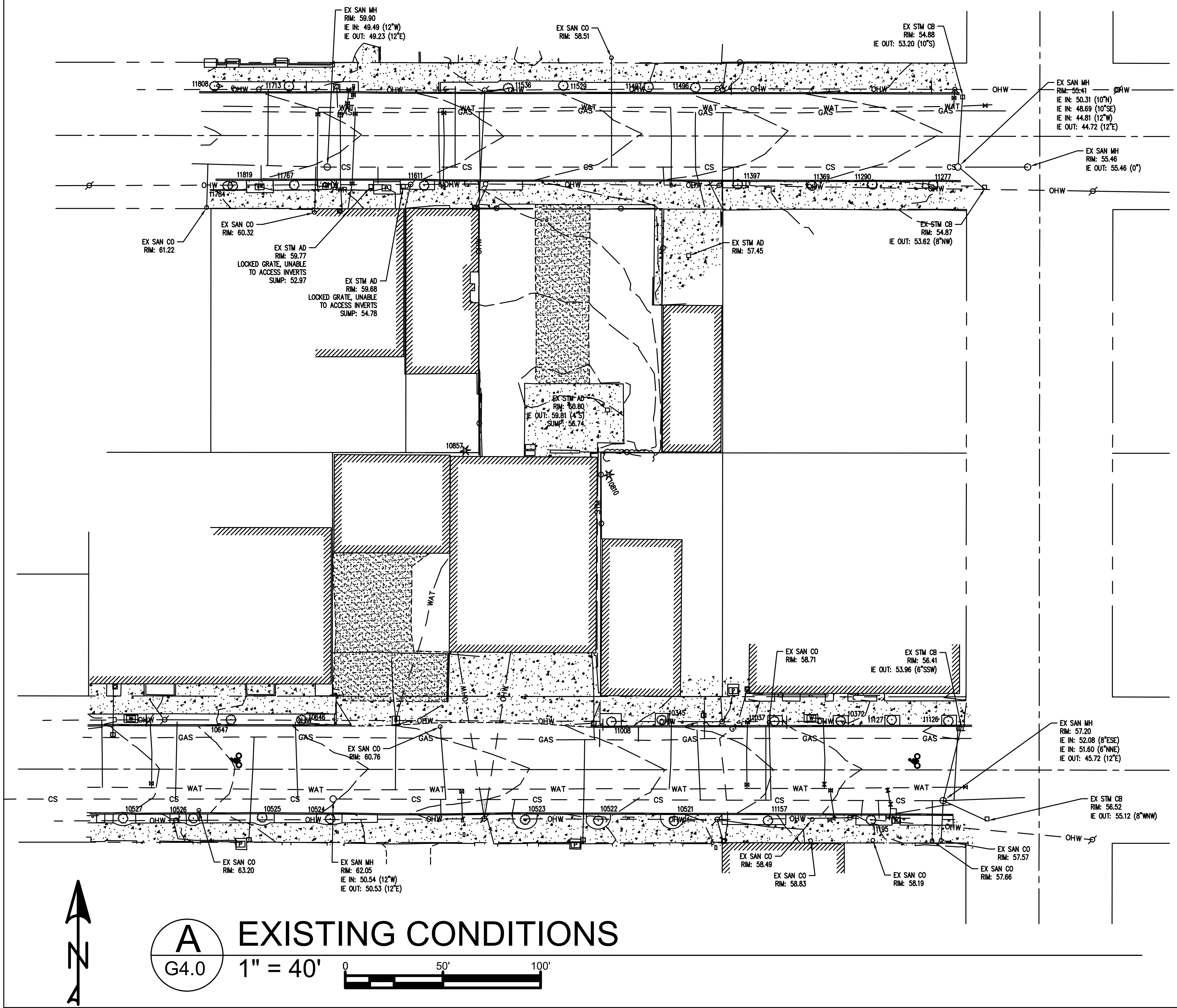
TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

GENERAL NOTES

Class:
CE 419
CAPSTONE II

G3.0

Scale AS SHOWN
Sheet 4 of 23



A
G4.0

EXISTING CONDITIONS

1" = 40'

LEGEND

EXISTING

- FIRE HYDRANT
- WATER METER
- WATER VALVE
- SANITARY SEWER CLEANOUT
- COMBINED SEWER MANHOLE
- SIGN
- STORM SEWER CATCH BASIN
- STORM SEWER AREA DRAIN
- GAS METER
- GAS VALVE
- GUY WIRE ANCHOR
- POWER POLE
- POWERVAULT
- STREET TREE
- RIGHT-OF-WAY LINE
- CENTERLINE
- DITCH
- CURB
- EDGE OF PAVEMENT
- EASEMENT
- FENCE LINE
- GRAVEL EDGE
- POWER LINE — PWR
- OVERHEAD WIRE — OHW
- GAS LINE — GAS
- STORM SEWER LINE — STM
- SANITARY SEWER LINE — SAN
- COMBINED SEWER LINE — CS
- WATER LINE — WAT
- BUILDING
- SAWCUT AND REMOVE AC

GENERAL NOTES:

INFORMATION ADDED AS FOUND

Designed ZACHARY NEWTON 2/7/2022
Drawn V6 2/24/2022
Checked NL, ZN 2/25/2022
Assignment GROUP DESIGN DRAWINGS
Submittal Date 05/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

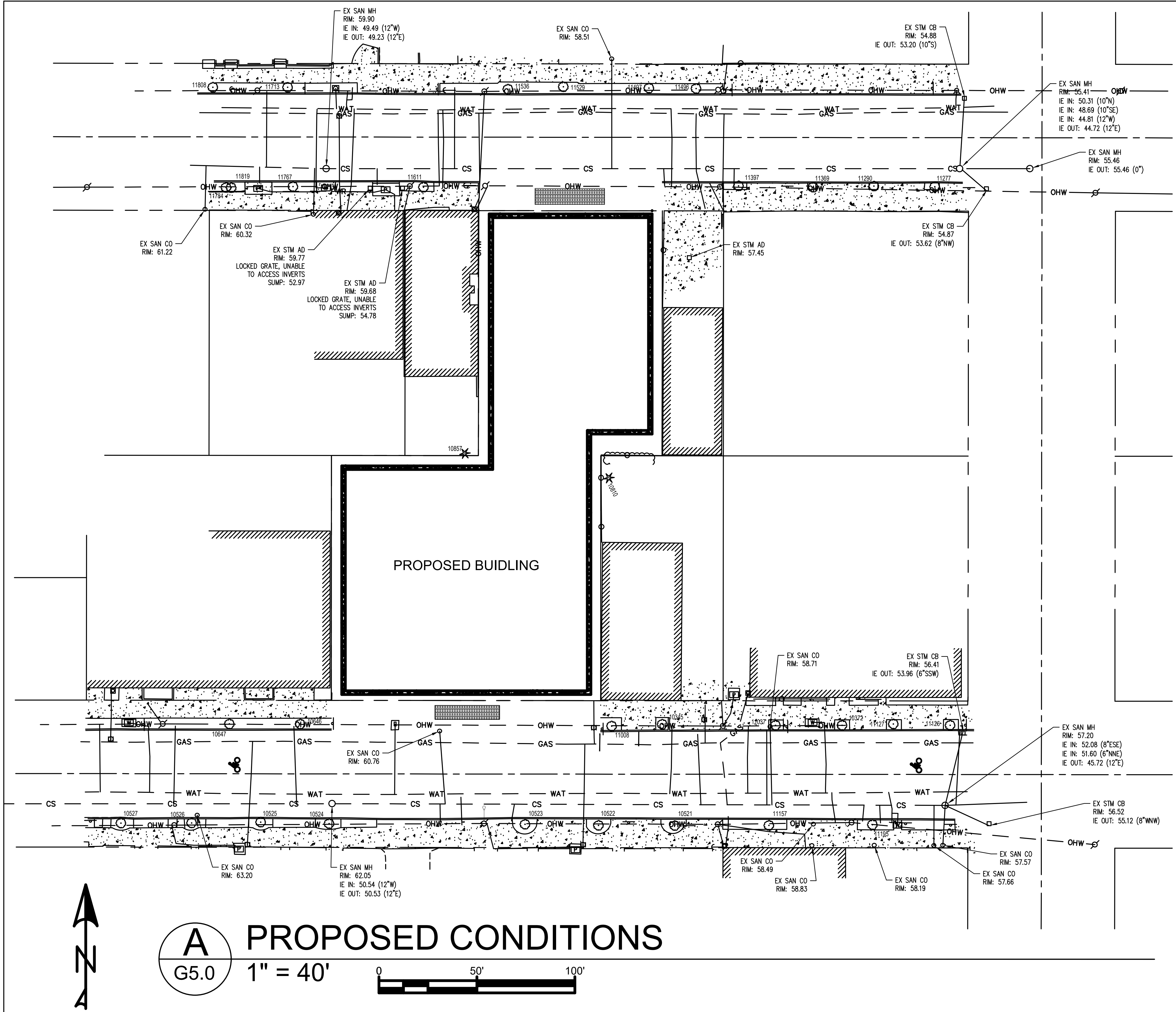
TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

EXISTING CONDITIONS

Class:
CE 418
CAPSTONE I

G4.0

Scale AS SHOWN
Sheet 5 of 23



A G5.0 PROPOSED CONDITIONS

1" = 40'

LEGEND

PROPOSED

- FIREHYDRANT
- WATER METER
- WATER VALVE
- SANITARY SEWER CLEANOUT
- COMBINED SEWER MANHOLE
- SIGN
- STORM SEWER CATCH BASIN
- STORM SEWER AREA DRAIN
- GAS METER
- GAS VALVE
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- EDGE OF PAVEMENT
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- FENCE LINE
- GRAVEL EDGE
- POWER LINE (PWR)
- OVERHEAD WIRE (OHW)
- GAS LINE (GAS)
- STORM SEWER LINE (STM)
- SANITARY SEWER LINE
- COMBINED SEWER LINE
- WATER LINE
- CONCRETE SIDEWALK
- PROPOSED SUBGRADE WATER MITIGATION SYSTEM

GENERAL NOTES:

1. CATCH BASIN LOCATION YET TO BE DETERMINED
2. SUBGRADE WATER MITIGATION SYSTEM SUBJECT TO CHANGE

Designed	ZACHARY NEWTON	2/7/2022
Drawn	V6	2/24/2022
Checked	NL, ZN	2/25/2022

Assignment GROUP DESIGN DRAWINGS

Submittal Date 05/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

PROPOSED SITE PLAN

Class:
CE 419
CAPSTONE II

G5.0

Scale AS SHOWN

Sheet 6 of 23

GENERAL DESIGN NOTES:

A. STRUCTURE DESIGNED IN ACCORDANCE WITH THE 2019 OSSC.

B. STRUCTURE DESIGNED FOR THE FOLLOWING LOADS:

ROOF DEAD LOADS:

ROOF (TOTAL) = 65 PSF

MECHANICAL = 100 PSF (WHERE APPLICABLE)

GREEN ROOF = 28 PSF (WHERE APPLICABLE)

ROOF LIVE LOADS:

GROUND SNOW LOAD = 15 PSF

FLAT ROOF SNOW LOAD = 25 PSF (MODIFIED FOR DRIFTING AND UNBALANCED LOADS WHERE APPLICABLE)

WIND LOADS:

BASIC WIND SPEED (V) = 97 MPH

EXPOSURE = B

IMPORTANCE FACTOR = II

SEISMIC DESIGN DATA:

SEISMIC DESIGN CATEGORY = D

SITE SOIL CLASS = C

S_s = 0.887

S_1 = 0.396

S_{DS} = 0.677

BASIC STRUCTURAL & SEISMIC RESISTING SYSTEM:

BEARING WALL SYSTEM: R = 6
STEEL SPECIAL CONCENTRICALLY BRACED FRAMES

ANALYZED USING THE EQUIVALENT LATERAL FORCE PROCEDURE

C. IF ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THESE DRAWINGS AND/OR CONDITIONS SPECIFIED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND SHALL NOT PROCEED WITH THE AFFECTED WORK. THE CONTRACTOR SHALL VERIFY ALL BUILDING DIMENSIONS, DETAILS, AND CONDITIONS PRIOR TO START OF CONSTRUCTION THAT MAY BE IMPACTED BY VARIATIONS FROM THE CONDITIONS SHOWN HEREIN.

STRUCTURAL STEEL NOTES:

A. STEEL SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" LATEST EDITION, OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

B. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, EXCEPT AS MODIFIED BELOW.

C. ALL STEEL TUBE COLUMNS SHALL CONFORM TO ASTM A500, GRADE B.

D. ALL STEEL PIPE COLUMNS SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, OR ASTM A501.

E. ALL MISCELLANEOUS STRUCTURAL STEEL SHALL BE ASTM A36.

F. ALL HEADED STUDS SHALL CONFORM TO ASTM A-108, GRADE 1015 OR 1020.

G. ALL ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 36.

H. ALL WELDS SHALL CONFORM TO THE "STRUCTURAL WELDING CODE (STEEL)," AWS D1.1, LATEST EDITION.

I. BOLTS FOR STEEL TO STEEL CONNECTIONS SHALL BE ASTM A325-X BOLTS, INSTALLED TO A "SNUG TIGHT" CONDITION AND TORQUED TO 50 FT-LBS.

J. BOLTS FOR WOOD TO WOOD OR WOOD TO STEEL SHALL BE ASTM A307 UNLESS NOTED OTHERWISE. PROVIDE STANDARD PLATE WASHERS UNDER ALL BOLT HEADS AND NUTS IN CONTACT WITH WOOD. INSTALL "FINGER TIGHT". DO NOT OVER TIGHTEN.

K. ALL BOLTS, NUTS, AND WASHERS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS.

L. ALL STRUCTURAL STEEL SHALL BE SHOP PRIMED WITH TWO COATS IN ACCORDANCE WITH AISC RECOMMENDATIONS.

M. STRUCTURAL STEEL SHOP DRAWINGS, PREPARED BY THE STEEL SUBCONTRACTORS, SHOWING COMPLETE DIMENSIONS, DETAILS, SIZES AND GRADES OF STEEL MEMBERS AND CONNECTIONS, TYPE AND NUMBER OF WELDS AND BOLTS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION OF THE STEEL COMPONENTS. THE STRUCTURAL STEEL SUBCONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING, VERIFICATION AND COORDINATION OF DIMENSIONS AND DETAILS WITH THE STRUCTURAL AND OTHER PORTIONS OF THE CONTRACT DRAWINGS.

M. THE STEEL FABRICATOR SHALL BE AISC CERTIFIED.

STRUCTURAL STEEL SPECIAL INSPECTION REQUIREMENTS

N. THE FOLLOWING VERIFICATIONS AND INSPECTIONS ARE REQUIRED FOR STRUCTURAL STEEL CONSTRUCTION:

1.) MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:
- a.) IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. - PERIODIC
- b.) MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED. - PERIODIC

2.) INSPECTION OF HIGH STRENGTH BOLTING:
- a.) BEARING-TYPE CONNECTIONS. - PERIODIC
- b.) SLIP-CRITICAL CONNECTIONS. - CONTINUOUS

3.) MATERIAL VERIFICATION OF STRUCTURAL STEEL:
- a.) IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. - PERIODIC
- b.) MANUFACTURER'S CERTIFIED MILL TEST REPORTS. - PERIODIC

4.) INSPECTION OF WELDING:
- a.) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS. - CONTINUOUS
- b.) MULTI-PASS FILLET WELDS. - CONTINUOUS
- c.) SINGLE-PASS FILLET WELDS GREATER THAN 5/16" - CONTINUOUS
- d.) SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16" - PERIODIC
- e.) FLOOR AND DECK WELDS. - PERIODIC

Designed ZACHARY NEWTON 5/14/2022
Drawn ZACHARY NEWTON 5/14/2022
Checked

Assignment GROUP DESIGN DRAWINGS
Submittal Date 5/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

GENERAL STRUCTURAL NOTES

TWENZ Engineering Inc.

Class:
CE 419
CAPSTONE II

S0.0

Scale N/A

CONCRETE NOTES:

A. ALL CONCRETE WORK SHALL CONFORM WITH A.C.I. "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318 - LATEST EDITION, AND "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315 - LATEST EDITION.

B. ALL CONCRETE FORM WORK WORK SHALL CONFORM WITH A.C.I. "RECOMMENDED PRACTICES FOR CONCRETE FORM WORK" - ACI 347.

C. ALL CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3500 PSI. ALL STRUCTURAL CONCRETE SHALL CONFORM WITH A.C.I. "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" - ACI 301.

D. CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR APPROVAL. MIX DESIGN SHALL INDICATE 7 AND 28 DAYS STRENGTHS, CEMENT CONTENT, AIR CONTENT, WATER-CEMENT RATIO, AMOUNT OF FINE AND COARSE AGGREGATES AND ADMIXTURES. ALL EXTERIOR CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED (4% TO 6%) UNLESS LOCAL STANDARDS ARE OTHERWISE.

MAXIMUM WATER-CEMENT RATIO = 0.49
MAXIMUM SLUMP LIMIT = 4"
MAXIMUM AGGREGATE SIZE:
- FOOTINGS & FOUNDATIONS = 3/4" TO 1 1/2"
- SLAB-ON-GRADE = 3/4" TO 1"
- CONCRETE FILL = 1/2"

CEMENT SHALL BE PORTLAND CEMENT, TYPE I OR II, CONFORMING TO ASTM-C-150.
CONCRETE AGGREGATES SHALL CONFORM TO ASTM C-33.
AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C-260.
NON-SHRINK GROUT SHALL CONFORM TO ASTM C-109.
EXPANSION JOINTS SHALL BE 1/2" THICK ASPHALT IMPREGNATED FIBERBOARD JOINT MATERIAL, CONFORMING TO ASTM D-1751.
CURING COMPOUND SHALL BE CLEAR, CONFORMING TO ASTM C-309.

E. COLD WEATHER CONCRETE WORK, WHEN APPLICABLE, SHALL CONFORM TO ACI 306.

F. HOT WEATHER CONCRETE WORK, WHEN APPLICABLE, SHALL CONFORM TO ACI 305.

G. SCREED SLABS AT GRADE LEVEL, MAINTAINING SURFACE FLATNESS OF MAXIMUM 1/4" IN 10'-0".

H. ALL BAR REINFORCING FOR CONCRETE TO CONFORM TO ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

I. CONCRETE ACCESSORIES TO BE ADEQUATE TO MAINTAIN REINFORCING ACCURATELY IN PLACE AND BE NON-CORROSIVE, NON-STAINING TYPE.

J. LAP ALL BAR REINFORCING PER ACI 318. STAGGER SPLICES IN HORIZONTAL WALLS AND SLABS.

K. REINFORCEMENT COVER, UNLESS NOTED OTHERWISE:

1.) FOOTINGS AND GRADE BEAMS - BOTTOM 3" TOP 1-1/2"
2.) WALLS - OUTSIDE 2", INSIDE 1"
3.) SLABS - 1 1/2" FROM TOP

L. WELDED WIRE FABRIC SHALL HAVE MINIMUM END AND SIDE LAPS OF 1'-0".

M. HILTI HY 200 OR SIMPSON SET XP EPOXY ADHESIVE IS REQUIRED FOR ALL REBAR DOWELS OR ALL THREAD DRILLED AND EPOXIED INTO CONCRETE.

N. CONCRETE STEEL REINFORCEMENT SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW.

SOIL NOTES:

A. SOIL BEARING CAPACITY USED IN DESIGN OF NEW FOUNDATION: 1500 PSF. THE SOIL BEARING CAPACITY WAS BASED ON THEMAXIMUM SOIL BEARING PRESSURE PER THE CITY OF PORTLAND BUILDING DEVELOPMENT SERVICES ON 4/18/2022. ALL FOOTINGS TO BEAR A MINIMUM OF 20" BELOW FINISHED GRADE ON UNDISTURBED SOIL OR APPROVED STRUCTURAL FILL. PROVIDE AND INSTALL STRUCTURAL FILL AS NECESSARY. IF UNSUITABLE SOILS ARE ENCOUNTERED, OR IF ROCK IS ENCOUNTERED IN THE AREA OF THE PROPOSED BOTTOM OF FOOTING, NOTIFY THE ENGINEER IMMEDIATELY.

B. THE GEOTECHNICAL ENGINEER SHALL OBSERVE AND APPROVE SUBGRADE SOILS PRIOR TO THE PLACEMENT OF STRUCTURAL FILL OR FOOTING FORMS.

C. STRUCTURAL FILL MATERIAL TYPE AND SOURCE SHALL BE APPROVED BY GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.

D. PLACEMENT AND COMPACTION OF STRUCTURAL FILL SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER AND/OR TEST RESULTS BY A QUALIFIED TESTING AGENCY.

E. COMPLY WITH SPECIFICATIONS AND GEOTECHNICAL REPORT RECOMMENDATIONS FOR ALL FILLS AND EXCAVATIONS.

CONCRETE SPECIAL INSPECTION REQUIREMENTS

ALL CONCRETE WORK, REINFORCING PLACEMENT, FORM WORK AND SHORING SHALL BE SPECIAL INSPECTED BY AN INDEPENDENT TESTING AGENCY RETAINED BY THE OWNER FOR THE FOLLOWING ITEMS:

a. INSPECT FORM WORK AND PLACEMENT OF REINFORCEMENT
b. SLUMP PER ASTM C-143. ONE TEST AT POINT OF DISCHARGE FOR EACH DAY'S POUR FOR EACH TYPE OF CONCRETE.
c. AIR CONTENT PER ASTM C-173 (VOLUMETRIC) OR ASTM C-231 (PRESSURE). ONE TEST FOR EACH DAY'S POUR FOR EACH TYPE OF CONCRETE.
d. CONCRETE TEMPERATURE - TEST EACH TIME A SET OF COMPRESSION TEST IS TAKEN.
e. COMPRESSION TEST SPECIMEN PER ASTM C-31 (ONE SET OF 4 STANDARD CYLINDERS)
f. COMPRESSION STRENGTH TEST PER ASTM C-39. ONE SET FOR EACH DAY'S POUR FOR EACH TYPE OF CONCRETE PLUS ADDITIONAL SETS FOR EACH 100 cy OVER AND ABOVE THE FIRST 100 cy.
g. TWO SPECIMENS TESTED AT 7 DAYS, ONE SPECIMENS TESTED AT 28 DAYS, AND ONE SPECIMEN RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED.
h. EPOXIED ALL THREAD AND REBAR DOWELS; AND EXPANSION ANCHORS INTO CONCRETE.

Designed ZACHARY NEWTON 5/14/2022
Drawn ZACHARY NEWTON 5/14/2022
Checked
Assignment GROUP DESIGN DRAWINGS
Submittal Date 5/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC - TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

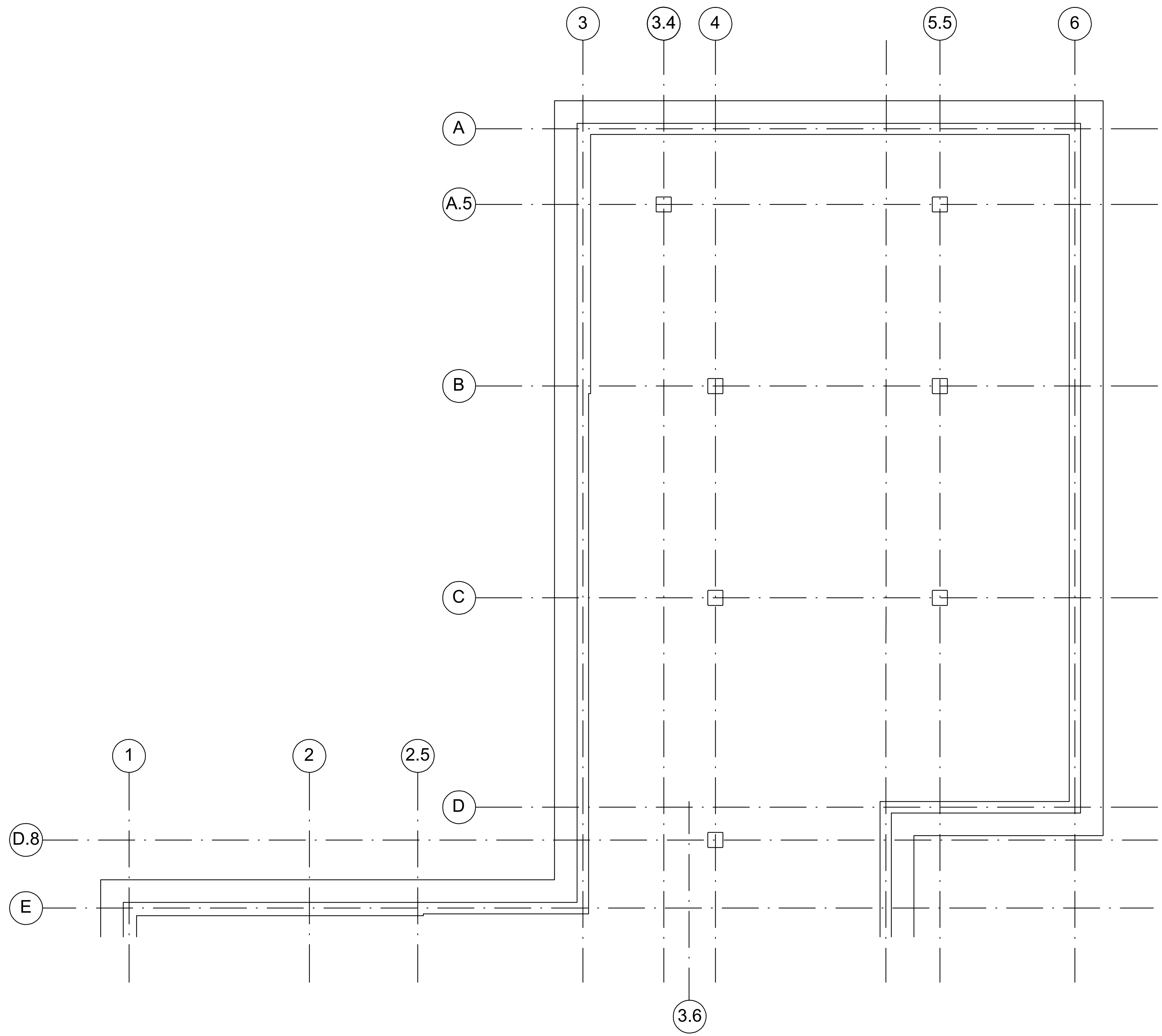
GENERAL CONCRETE NOTES

TWENZ Engineering Inc.

Class:
CE 419
CAPSTONE II

S1.0

Scale N/A



A / S1.1 PARKING GARAGE - NORTH - FOUNDATION PLAN

SCALE: 1/16" = 1'-0"

Designed	ZACHARY NEWTON	5/14/2022
Drawn	ZACHARY NEWTON	5/14/2022
Checked		

Assignment GROUP DESIGN DRAWINGS

Submittal Date 5/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

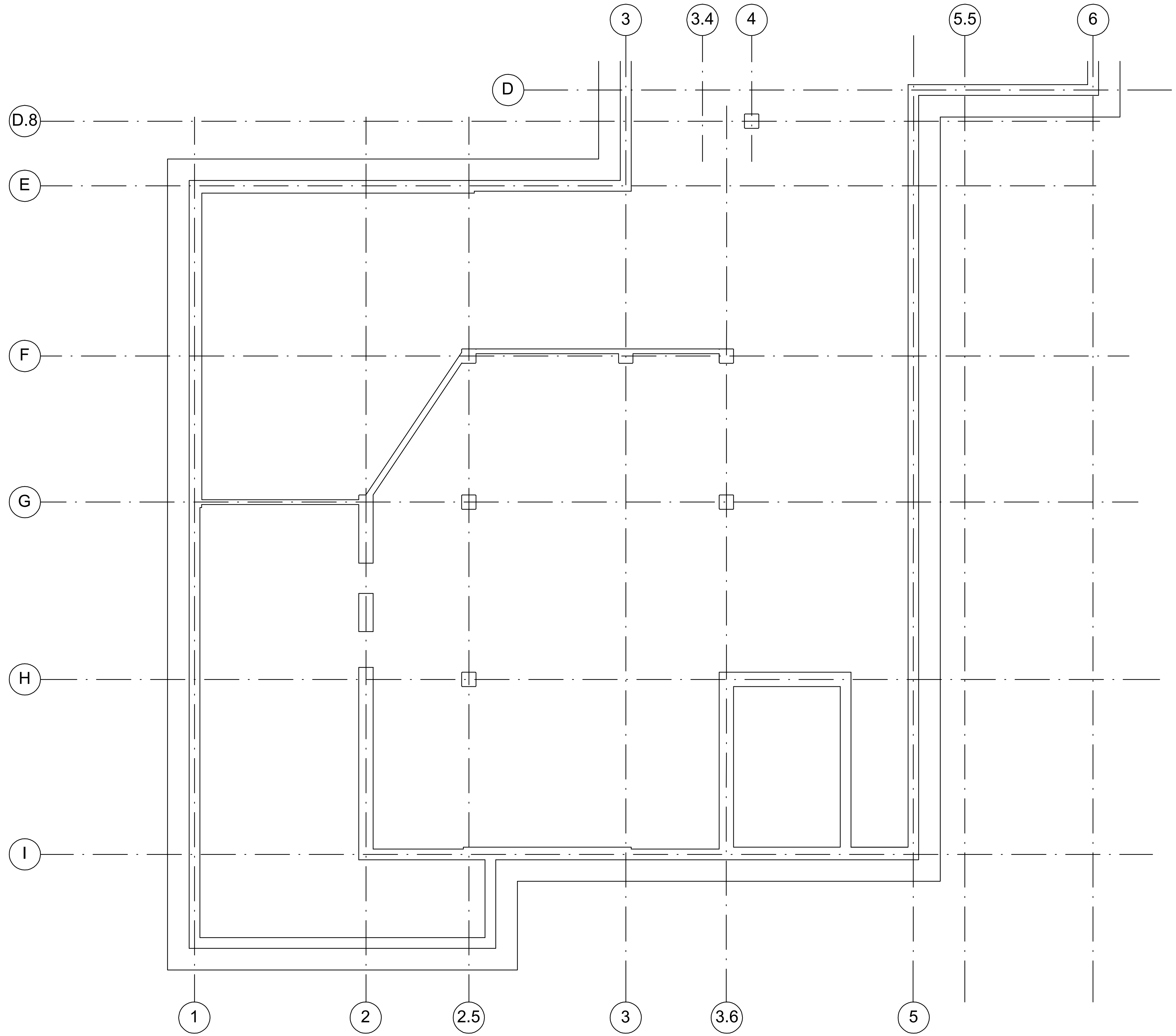
TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

NORTH FOUNDATION PLAN

Class:
CE 419
CAPSTONE II

S1.1

Scale 1/16" = 1'



N

A
S1.2
PARKING GARAGE - SOUTH - FOUNDATION PLAN
SCALE: 1/16" = 1'-0"

Designed ZACHARY NEWTON 5/14/2022
Drawn ZACHARY NEWTON 5/14/2022
Checked
Assignment GROUP DESIGN DRAWINGS
Submittal Date 5/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

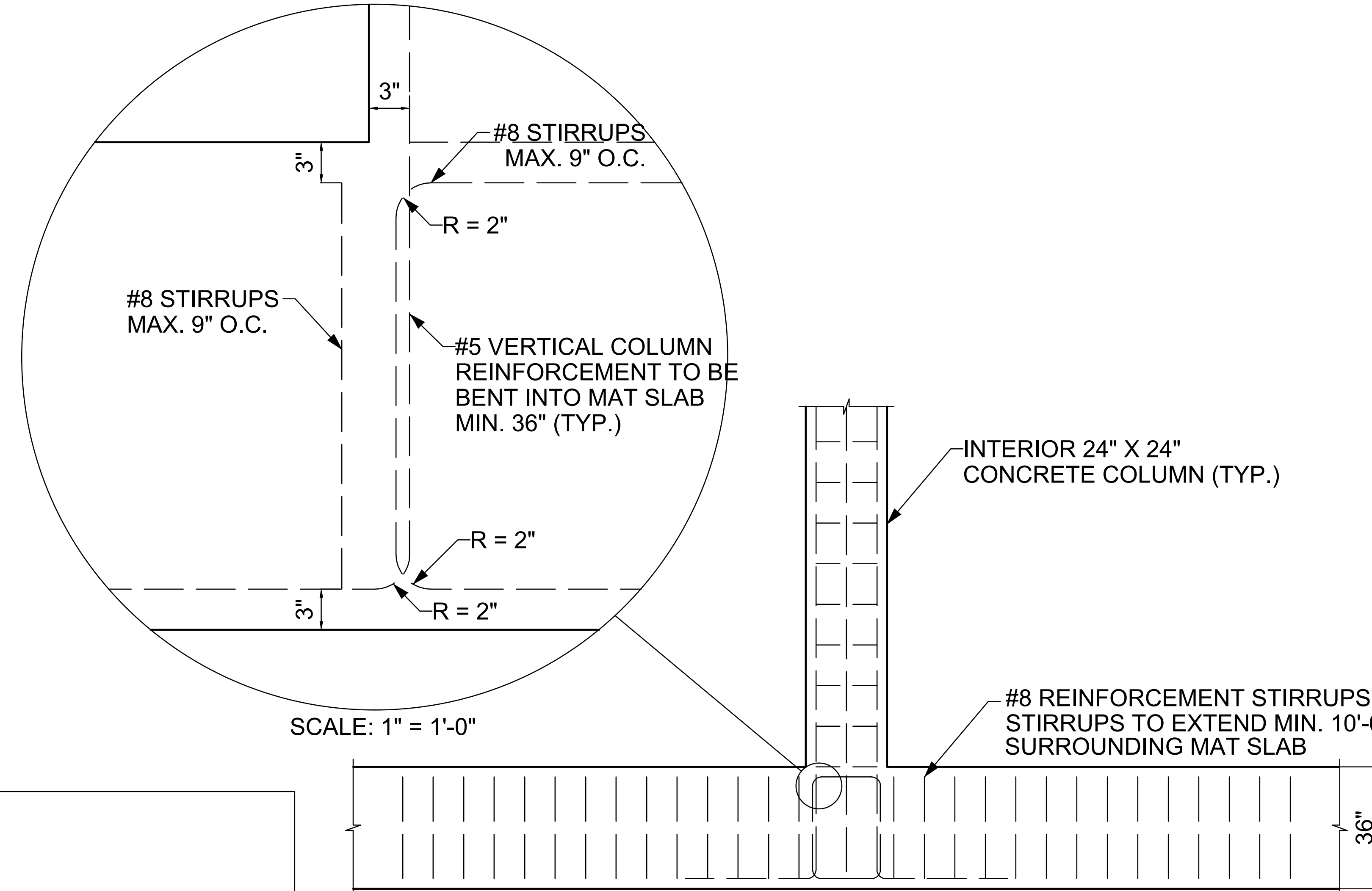
TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

SOUTH FOUNDATION PLAN

Class:
CE 419
CAPSTONE II

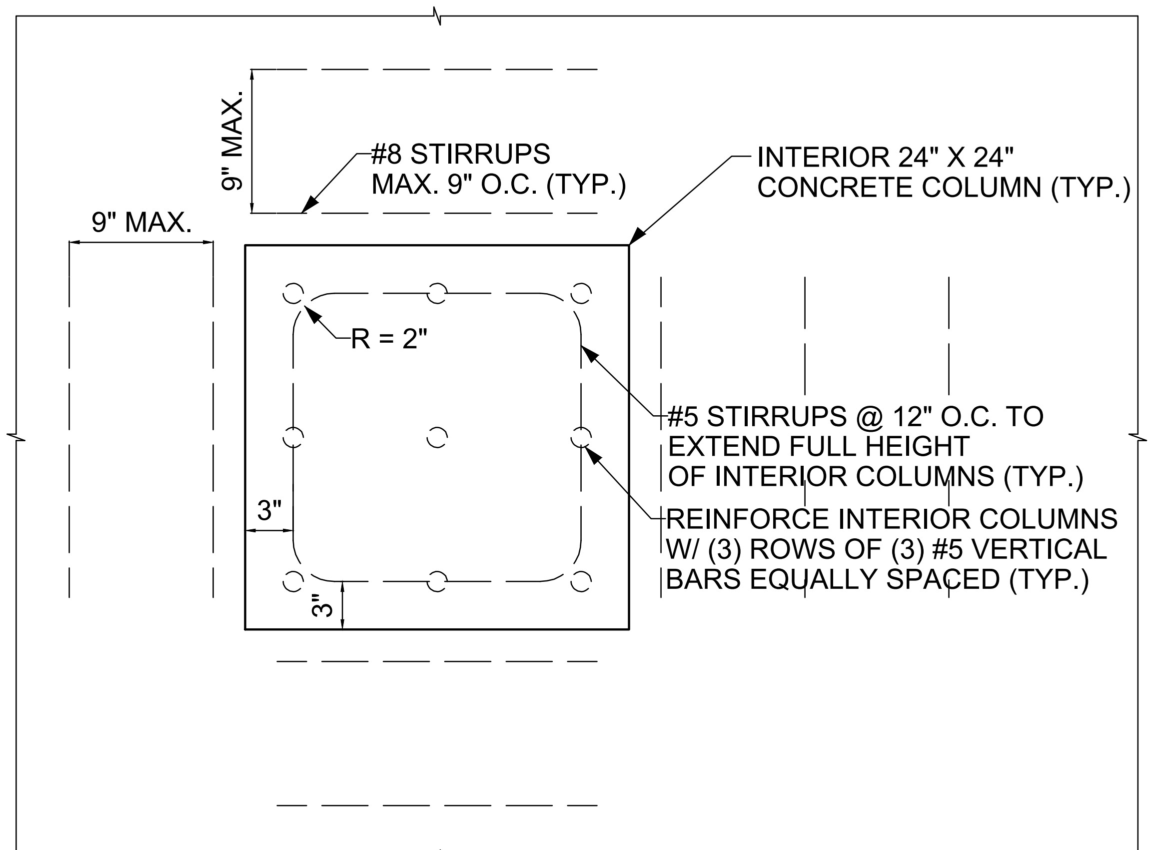
S1.2

Scale 1/16" = 1'



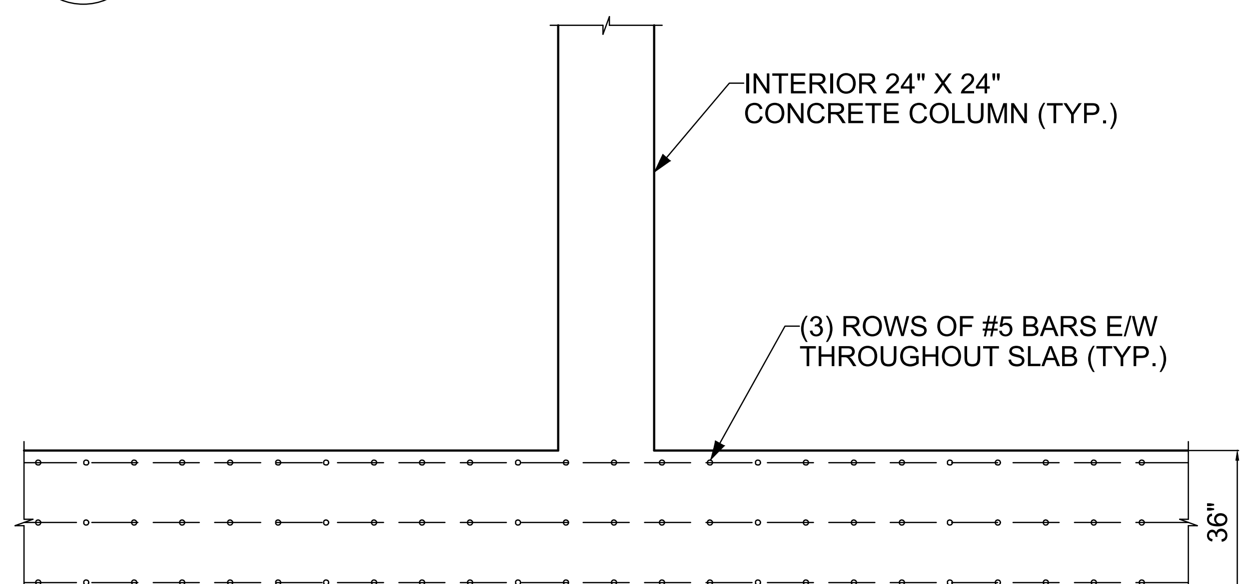
B S1.3 MAT SLAB STIRRUP SECTION DETAIL

SCALE: 1/4" = 1'-0"



A S1.3 COLUMN SECTION DETAIL

SCALE: 1" = 1'-0"



C S1.3 MAT SLAB REINFORCEMENT DETAIL

SCALE: 1/4" = 1'-0"

Designed	ZACHARY NEWTON 5/14/2022
Drawn	ZACHARY NEWTON 5/14/2022
Checked	
Assignment	GROUP DESIGN DRAWINGS
Submittal Date	5/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

FOUNDATION DETAILS

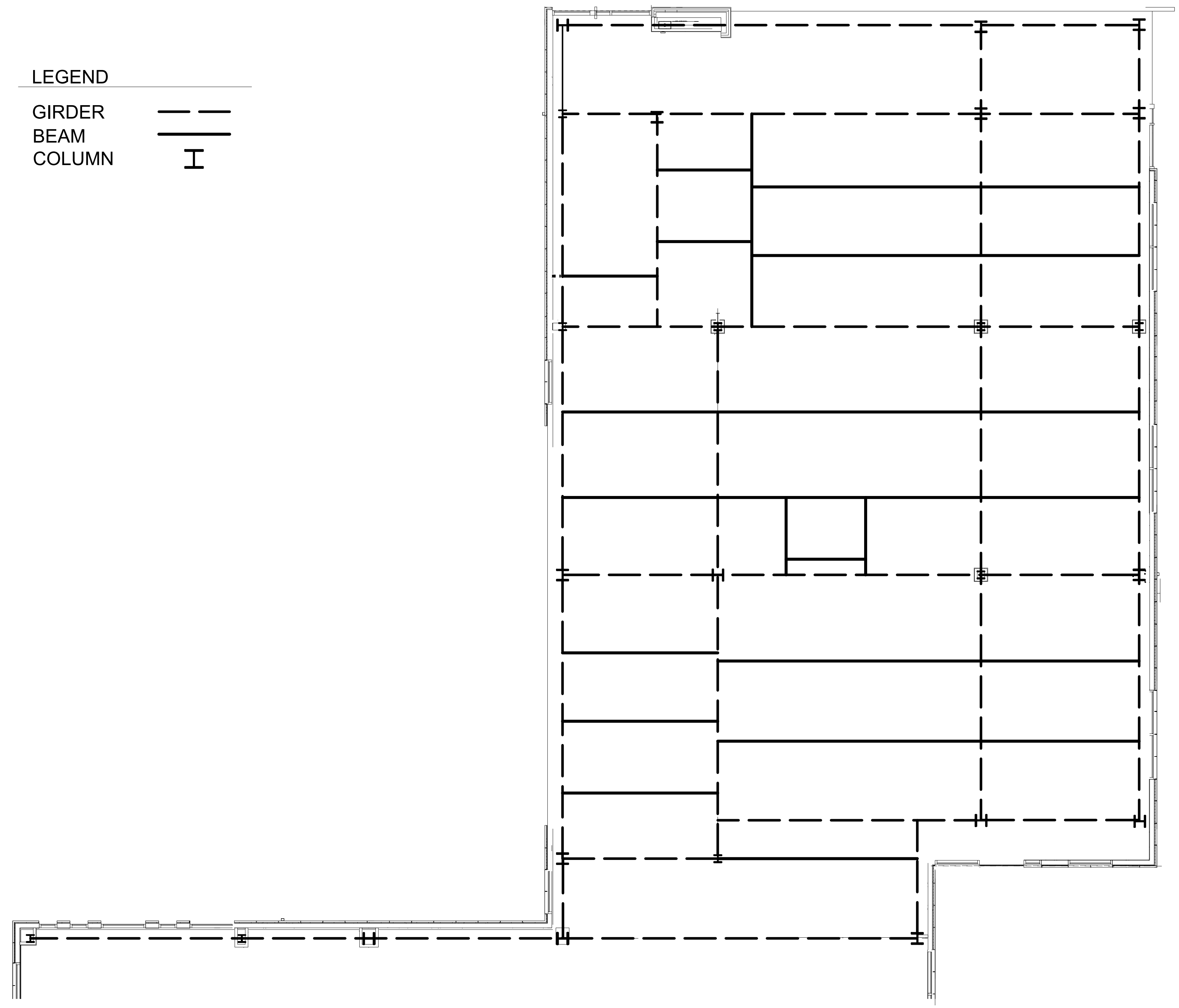
Class:
CE 419
CAPSTONE II

S1.3

Scale AS SHOWN

LEGEND

GIRDER
BEAM
COLUMN



A S2.1 SECOND FLOOR FRAMING PLAN (NORTH)

SCALE: 1/16" = 1'-0"

N

Designed WILLIAM MURAVIOV 4/27/22
Drawn WILLIAM MURAVIOV 4/27/22
Checked

Assignment GROUP DESIGN DRAWINGS
Submittal Date 05/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

SECOND FLOOR FRAMING PLAN (NORTH)

TWENZ Engineering Inc.

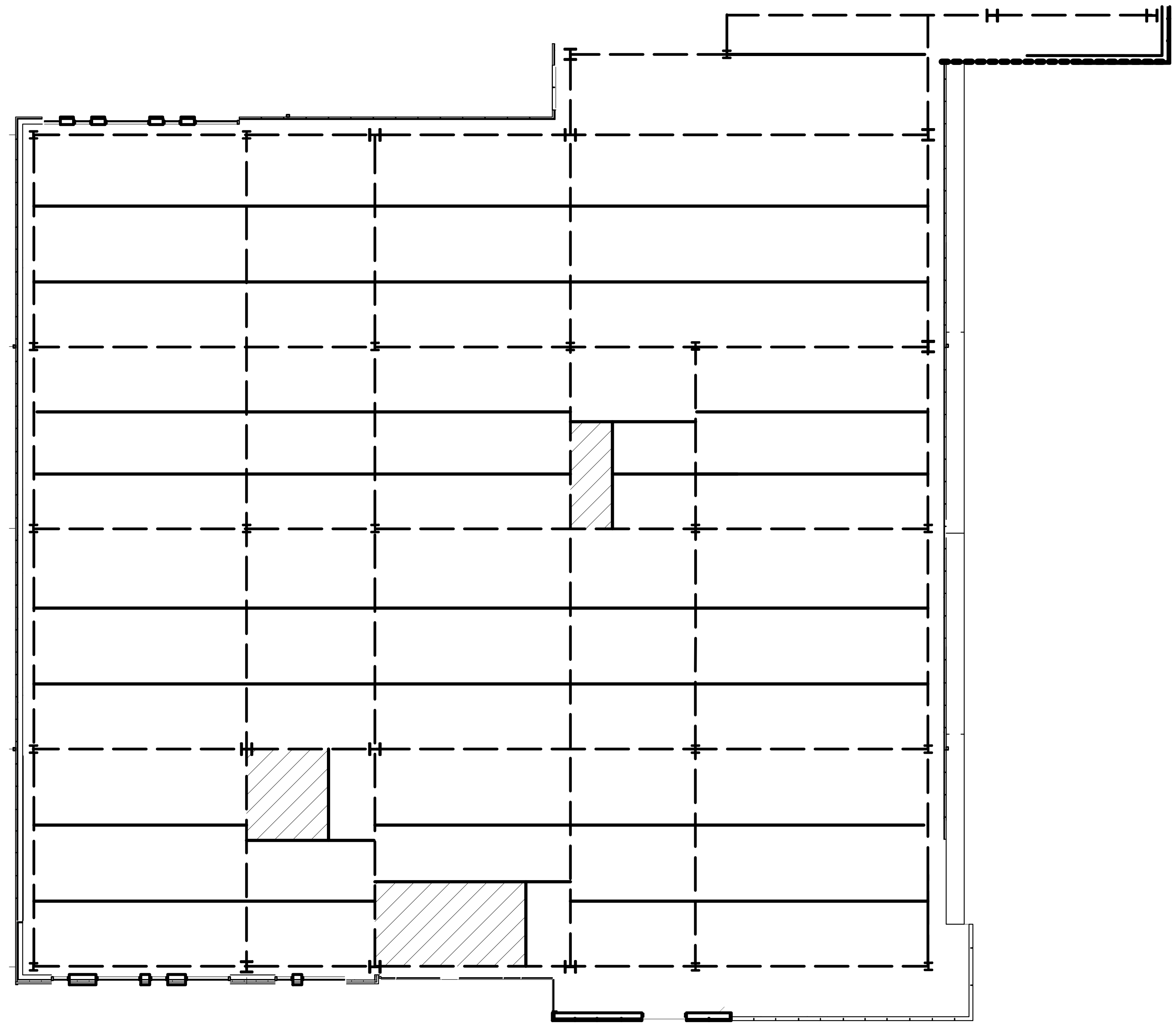
Class:
CE 419
CAPSTONE II

S2.1

Scale AS SHOWN
Sheet 12 of 23

LEGEND

GIRDER
BEAM
COLUMN



N

A
S2.2

SECOND FLOOR FRAMING PLAN (SOUTH)

SCALE: 1/16" = 1'-0"

Designed WILLIAM MURAVIOV 4/27/22
Drawn WILLIAM MURAVIOV 4/27/22
Checked

Assignment GROUP DESIGN DRAWINGS
Submittal Date 05/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

SECOND FLOOR
FRAMING PLAN
(SOUTH)

TWENZ Engineering Inc.

Class:
CE 419
CAPSTONE II

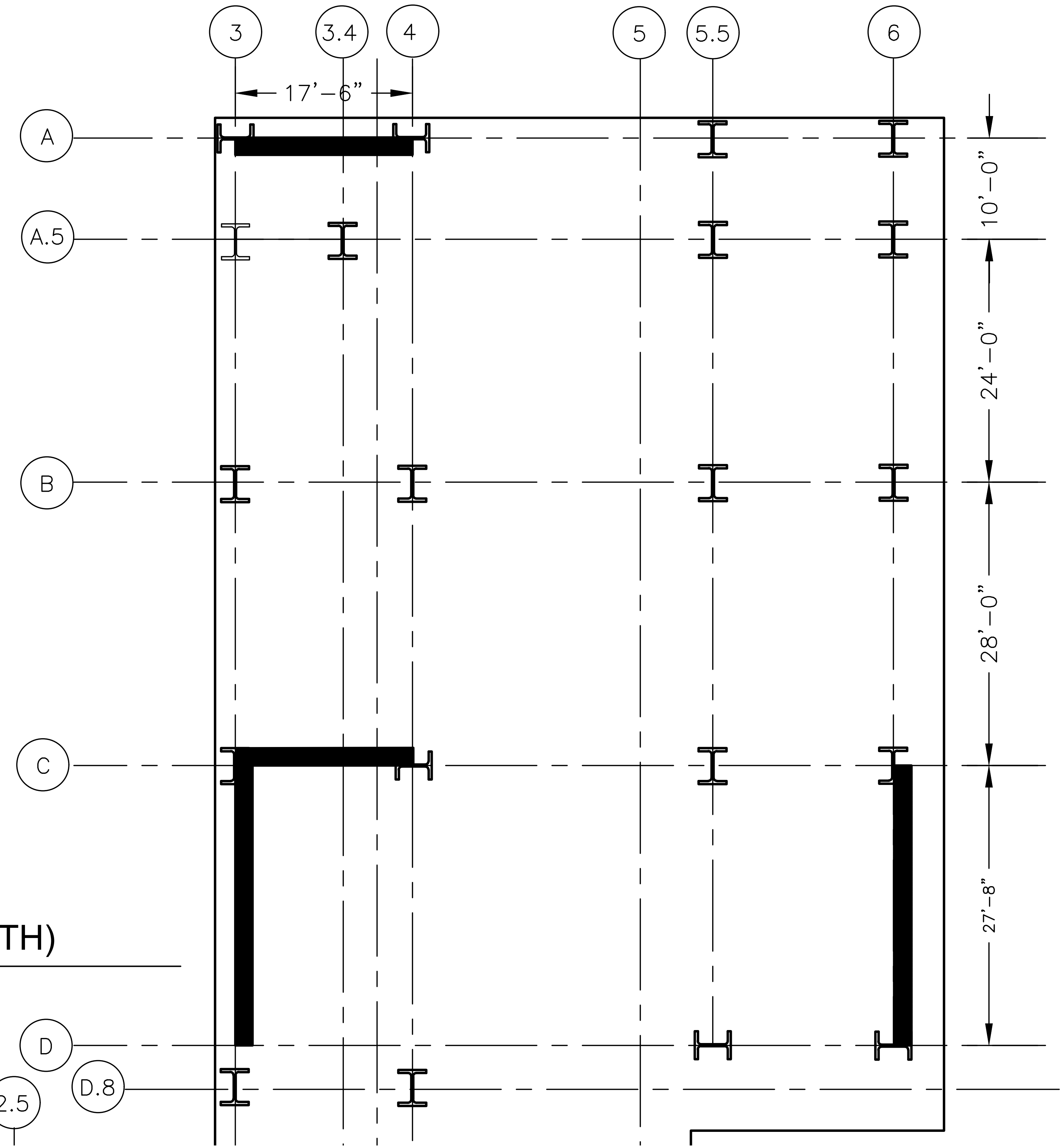
S2.2

Scale AS SHOWN

LEGEND

- COLUMN
- PROPOSED BRACED FRAME LOCATION
- BUILDING BOUNDARY

N



1 2 2.5

A S3.1 BRACED FRAME LOCATIONS (NORTH)

0 1 2 1"=12'

Designed THANH HUYNH	2/7/2022
Drawn THANH HUYNH	03/06/2022
Checked	
Assignment GROUP DESIGN DRAWINGS	
Submittal Date 05/15/2022	

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

BRACED FRAME LOCATIONS (NORTH)

TWENZ Engineering Inc.

Class:
CE 419
CAPSTONE II

S3.1

Scale AS SHOWN

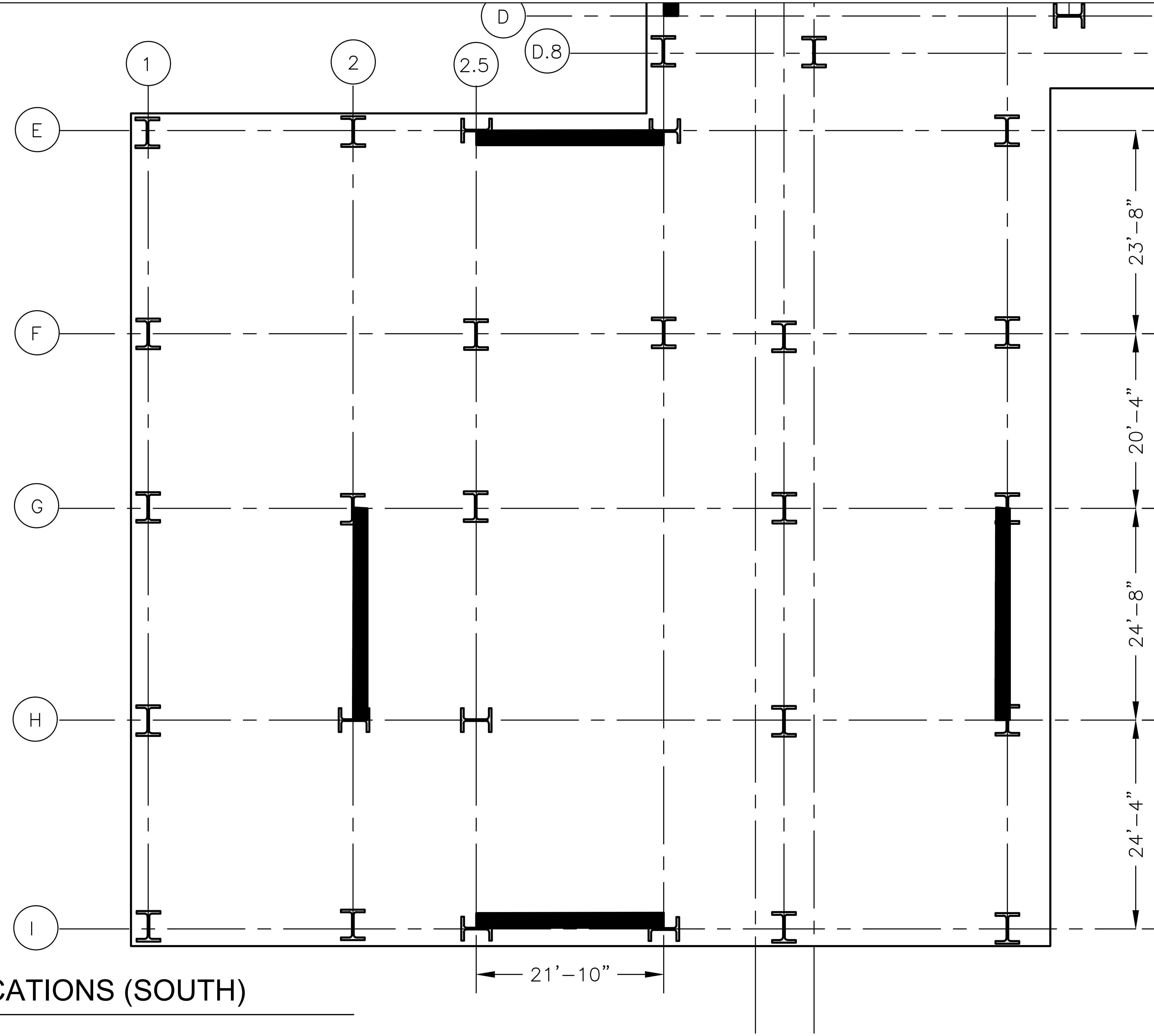
LEGEND

COLUMN

PROPOSED BRACED FRAME LOCATION

BUILDING BOUNDARY

N



A S3.2 BRACED FRAME LOCATIONS (SOUTH)

0 1 2 1"=12'

Designed THANH HUYNH 2/7/2022
Drawn THANH HUYNH 03/06/2022
Checked
Assignment GROUP DESIGN DRAWINGS
Submittal Date 05/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC - TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

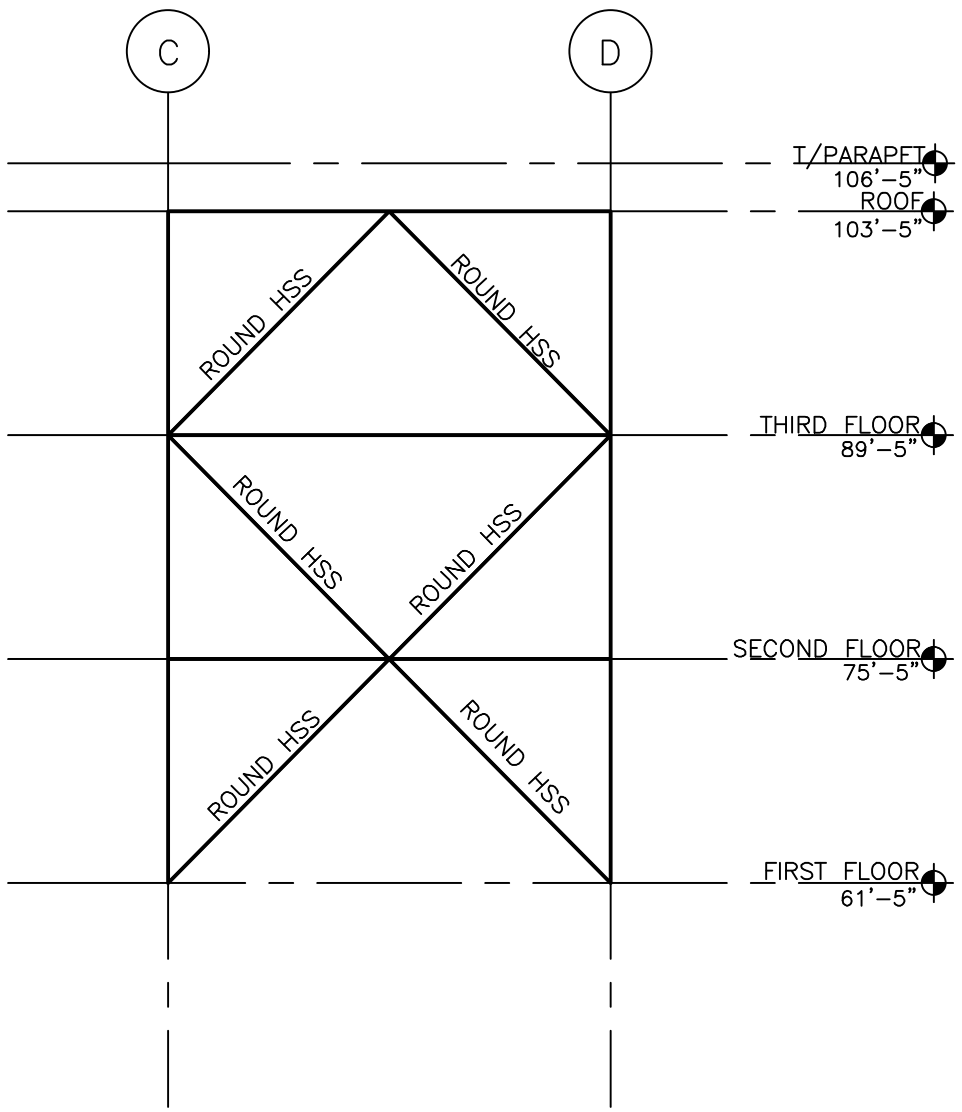
BRACED FRAME LOCATIONS (SOUTH)

TWENZ Engineering Inc.

Class:
CE 419
CAPSTONE II

S3.2

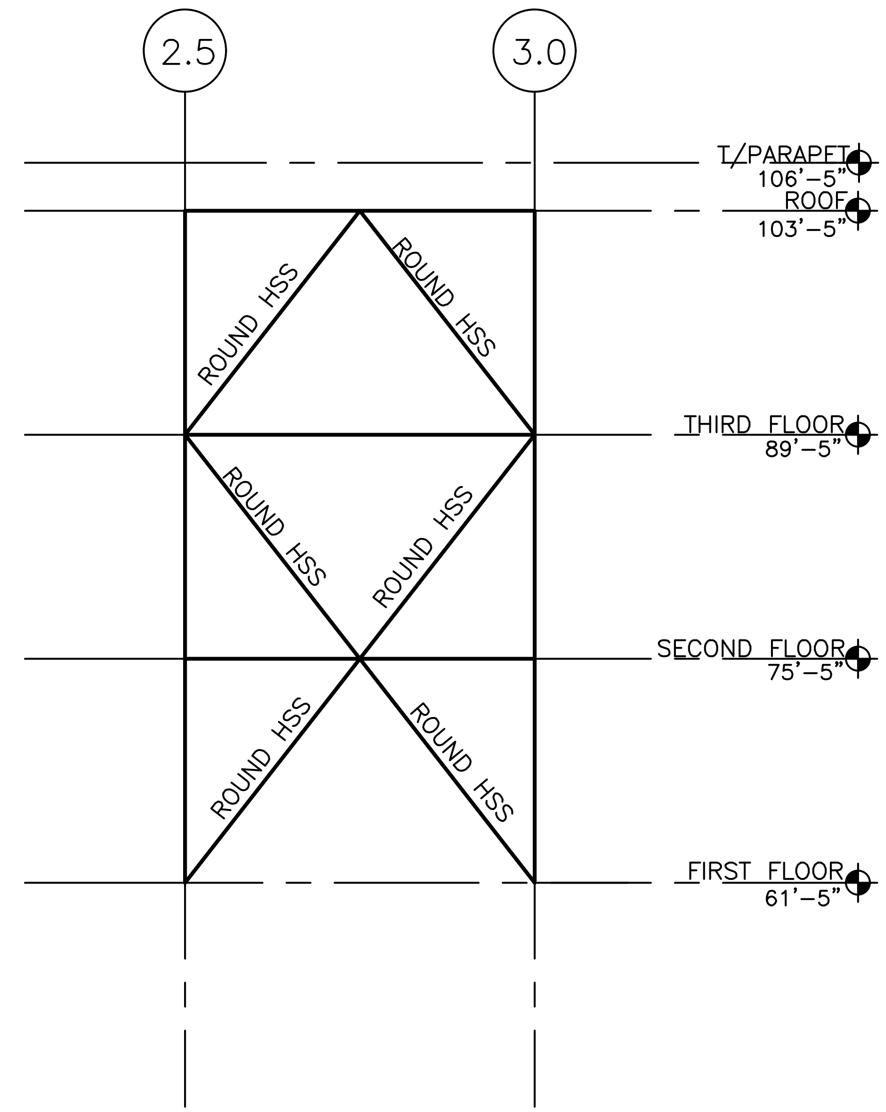
Scale AS SHOWN
Sheet 15 of 23



A
S3.3

TYP. E-W BRACED FRAME ELEVATION

0 1 2
1"=12'



A
S3.3

TYP. N-S BRACED FRAME ELEVATION

0 1 2
1"=12'

Designed THANH HUYNH
Drawn THANH HUYNH
Checked

Assignment GROUP DESIGN DRAWINGS
Submittal Date 05/15/2022

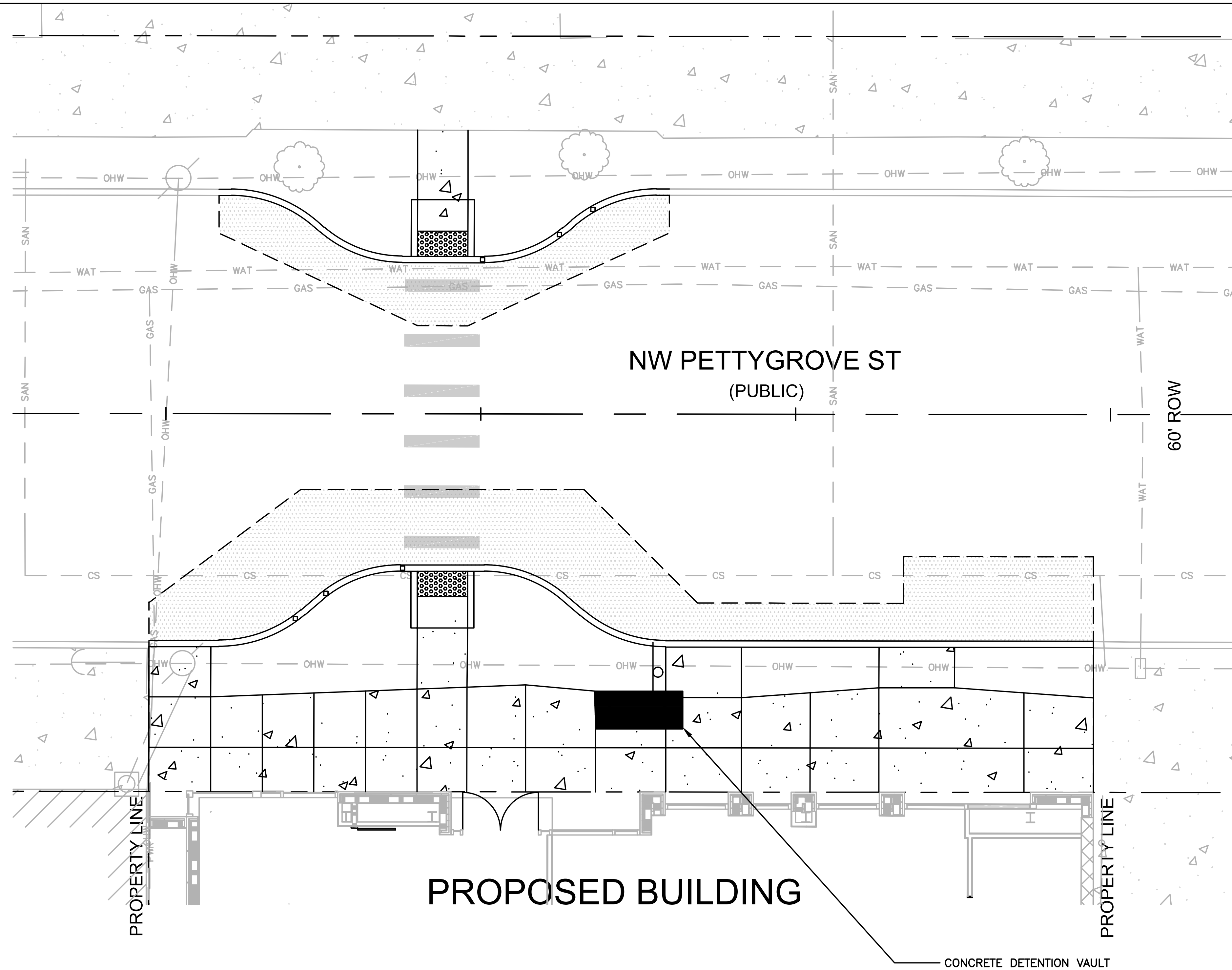
OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

BRACED FRAME ELEVATIONS

Class:
CE 419
CAPSTONE II

S3.3



N

A
W1.0

NORTH DETENTION VAULT PLAN

1"=10'

0 10' 20'

SHEET NOTES:

1. NORTH DETENTION VAULT WILL BE 5 FEET OFF OF NORTH FACE OF PROPOSED BUILDING ALONG NW PETTYGROVE ST.
2. FINAL LOCATION HAS NOT BEEN DETERMINED YET
3. CONCRETE DETENTION VAULT WILL BE PLACED BENEATH CURB

Designed	ZACHARY NEWTON	2/7/2022
Drawn	NICOTA LIESY	4/27/2022
Checked	NICOTA LIESY	4/27/2022
Assignment	GROUP DESIGN DRAWINGS	
Submittal Date	05/15/2022	

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

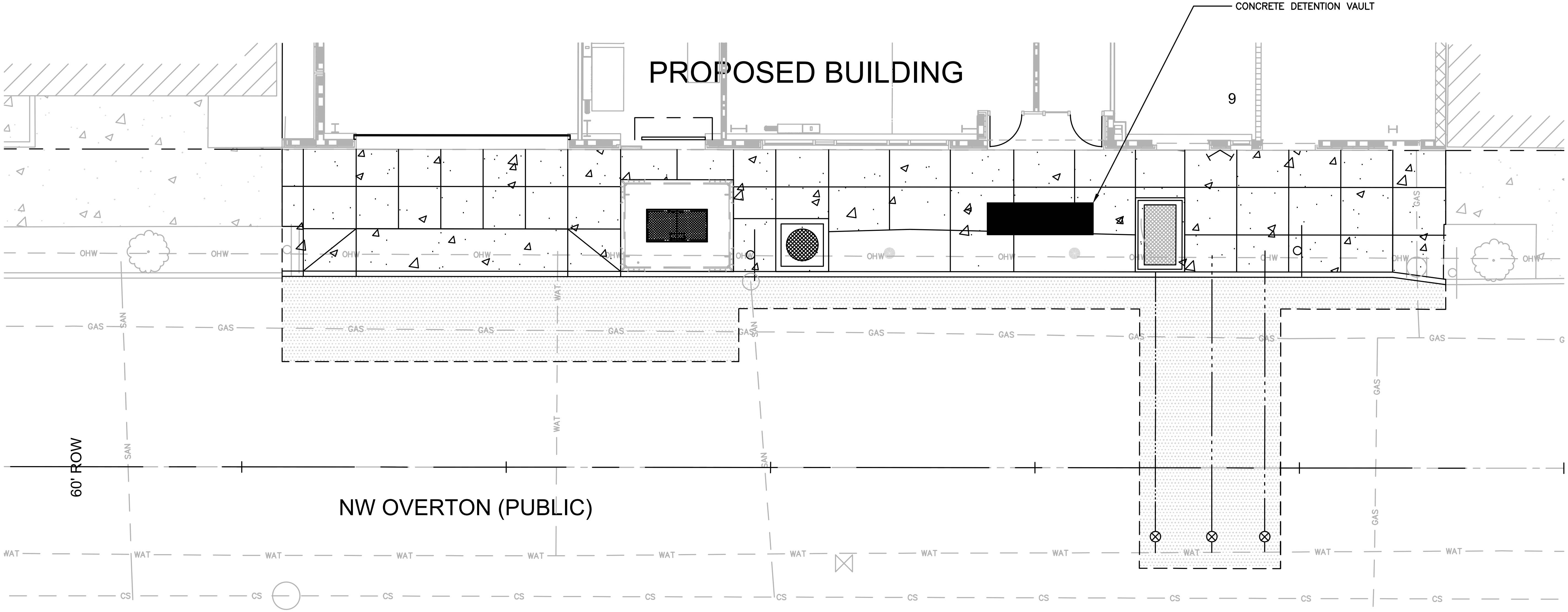
NORTH DETENTION VAULT PLAN

TWENZ Engineering Inc.

Class:
CE 419
CAPSTONE II

W1.0

Scale AS SHOWN



A
W2.0

SOUTH DETENTION VAULT PLAN

1"=10'

0 10' 20'

SHEET NOTES:

1. SOUTH DETENTION VAULT WILL BE 5 FEET OFF OF SOUTH FACE OF PROPOSED BUILDING ALONG NW OVERTON
2. FINAL LOCATION HAS NOT BEEN DETERMINED YET
3. CONCRETE DETENTION VAULT WILL BE PLACED BENEATH CURB

Designed	ZACHARY NEWTON	2/7/2022
Drawn	NICOTA LIESY	4/27/2022
Checked	NICOTA LIESY	4/27/2022
Assignment	GROUP DESIGN DRAWINGS	
Submittal Date	5/15/2022	

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

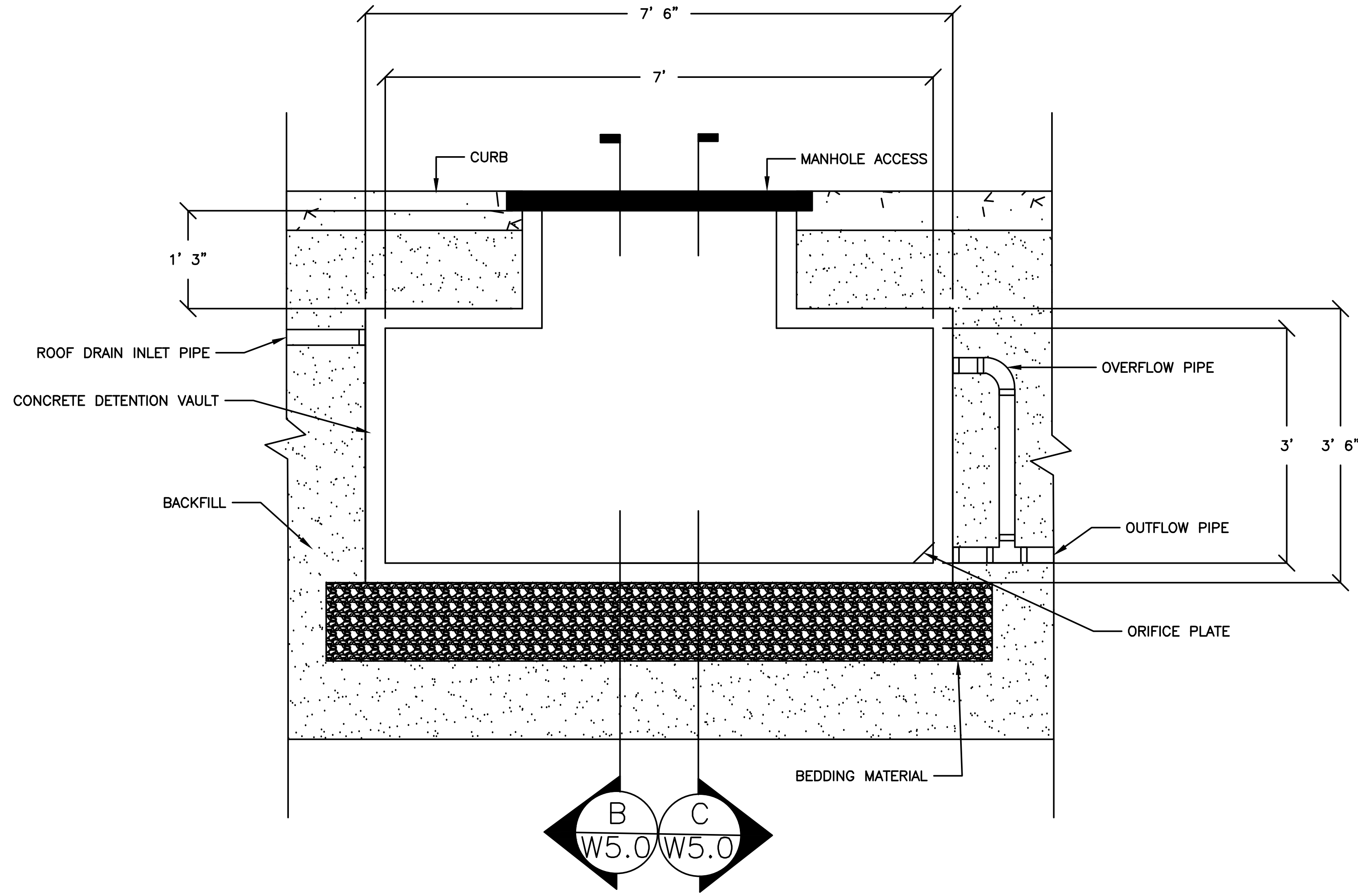
SOUTH DETENTION VAULT PLAN

TWENZ Engineering Inc.

Class:
CE 419
CAPSTONE II

W2.0

Scale AS SHOWN



A
W3.0

NORTH DETENTION VAULT ELEVATION

1"=2'

0 2' 4'

LEGEND:

BACKFILLED SOIL

BEDDING MATERIAL

CURB

SHEET NOTES:

1. 6 INCH CURB SITS ATOP BACKFILL
2. ROOF INLET WILL FILL CONCRETE DETENTION VAULT
3. OVERFLOW OUTLET WILL DRAIN EXCESS WATER OUT OF VAULT
4. OUTFLOW TO BE TIED INTO CITY STORM
5. BEDDING MATERIAL AND DEPTH TO BE DETERMINED
6. ALL PIPES TO BE 2 INCH DIA. PVC

Designed ZACHARY NEWTON 2/7/2022
Drawn NICOTA LIESY 4/27/2022
Checked NICOTA LIESY 4/27/2022
Assignment GROUP DESIGN DRAWINGS
Submittal Date 5/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

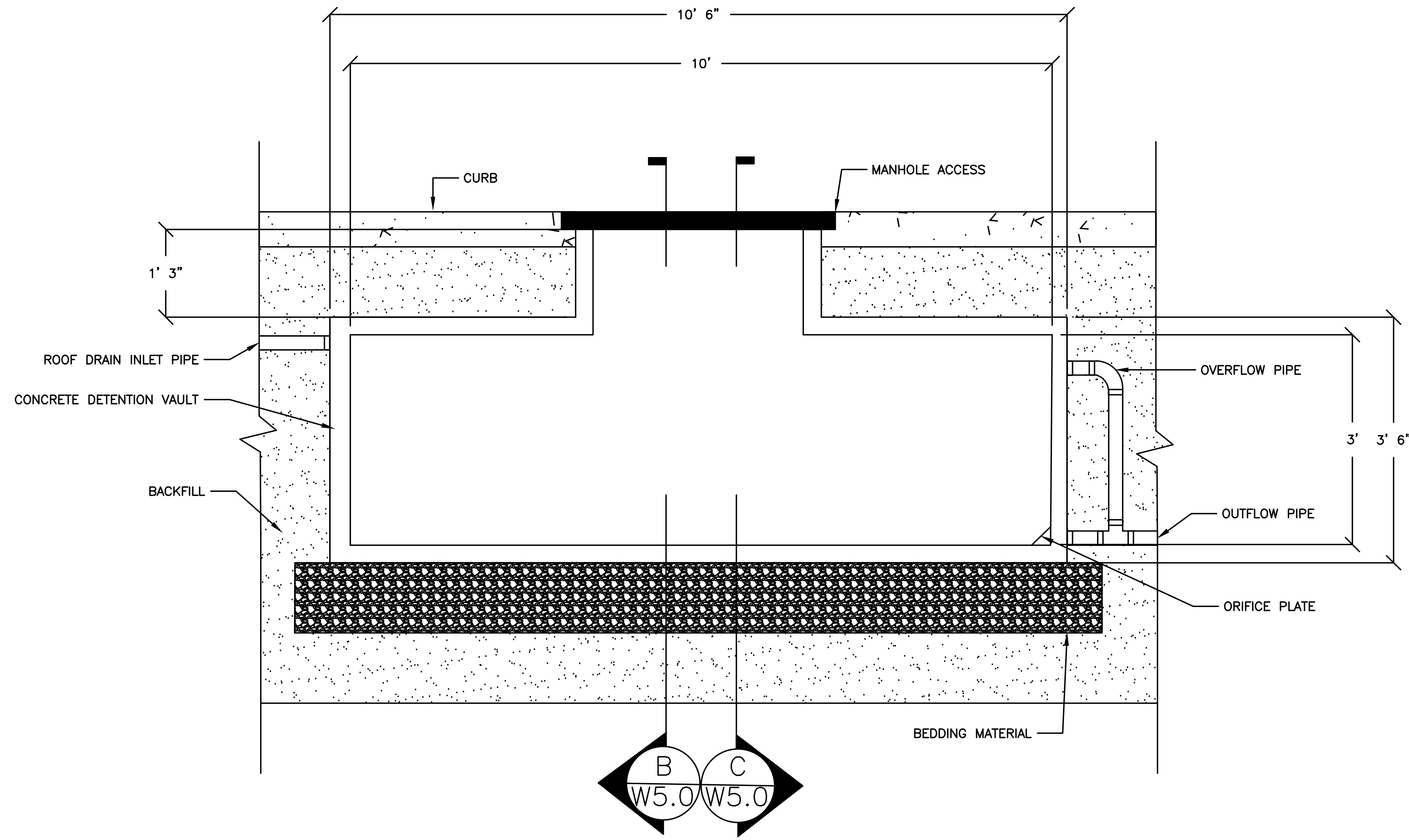
NORTH DETENTION VAULT ELEVATION

TWENZ Engineering Inc.

Class:
CE 419
CAPSTONE II

W3.0

Scale AS SHOWN
Sheet 19 of 23



A W4.0 SOUTH DETENTION VAULT ELEVATION

1"=2'

0 2' 4'

LEGEND:

BACKFILLED SOIL

BEDDING MATERIAL

CURB

SHEET NOTES:

1. 6 INCH CURB SITS ATOP BACKFILL
2. ROOF INLET WILL FILL CONCRETE DETENTION VAULT
3. OVERFLOW OUTLET WILL DRAIN EXCESS WATER OUT OF VAULT
4. OUTFLOW TO BE TIED INTO CITY STORM
5. BEDDING MATERIAL AND DEPTH TO BE DETERMINED
6. ALL PIPES TO BE 2 INCH DIA. PVC

Designed	ZACHARY NEWTON	2/7/2022
Drawn	NICOTA LIESY	4/27/2022
Checked	NICOTA LIESY	4/27/2022
Assignment	GROUP DESIGN DRAWINGS	
Submittal Date	5/15/2022	

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

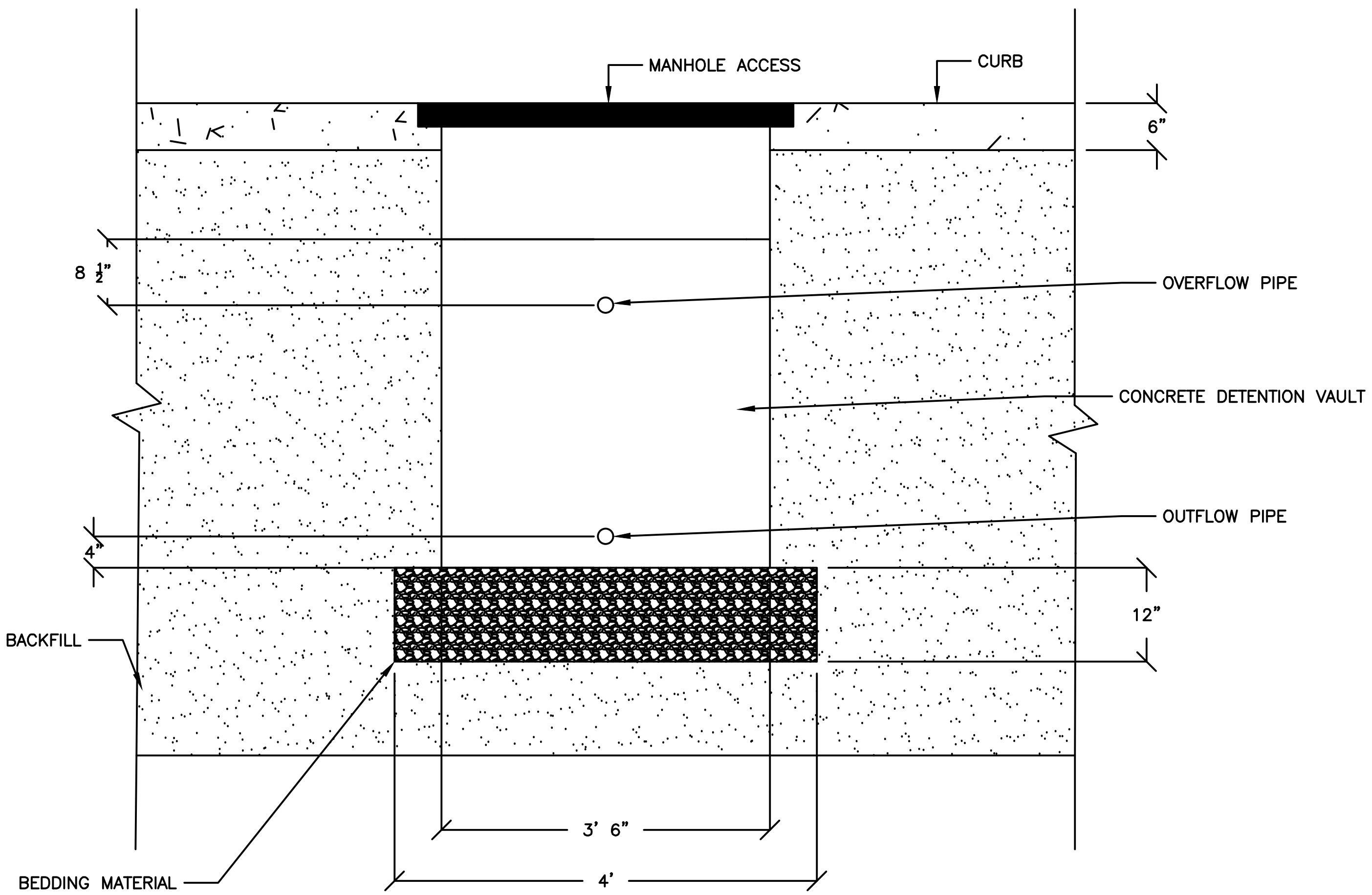
TWENZ ENGINEERING, INC — TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

SOUTH DETENTION VAULT ELEVATION

Class:
CE 419
CAPSTONE II

W4.0

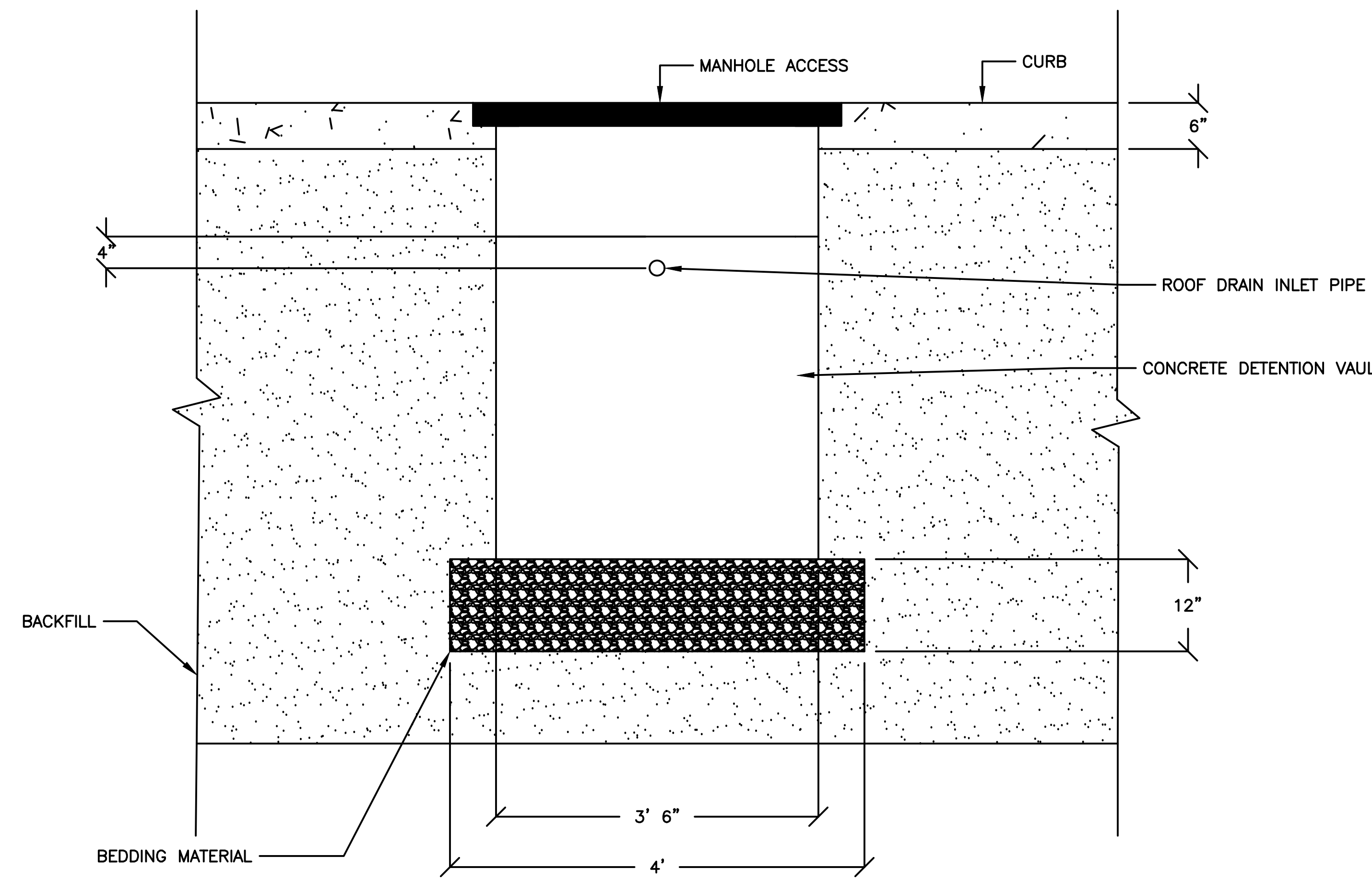
Scale AS SHOWN



B DETENTION VAULT CROSS-SECTION

1"=2'

0 2' 4'



C DETENTION VAULT CROSS-SECTION

1"=2'

0 2' 4'

LEGEND:

BACKFILLED SOIL

BEDDING MATERIAL

CURB

SHEET NOTES:

1. 6 INCH CURB SITS ATOP BACKFILL
2. ROOF INLET WILL FILL CONCRETE DETENTION VAULT
3. OVERFLOW OUTLET WILL DRAIN EXCESS WATER OUT OF VAULT
4. OUTFLOW TO BE TIED INTO CITY STORM
5. CROSS-SECTIONS ARE THE SAME FOR BOTH DETENTION VAULTS
6. ALL PIPES ARE TO BE 2 INCH DIA. PVC

Designed ZACHARY NEWTON 2/7/2022
Drawn NICOTA LIESY 4/27/2022
Checked NICOTA LIESY 4/27/2022
Assignment GROUP DESIGN DRAWINGS
Submittal Date 5/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

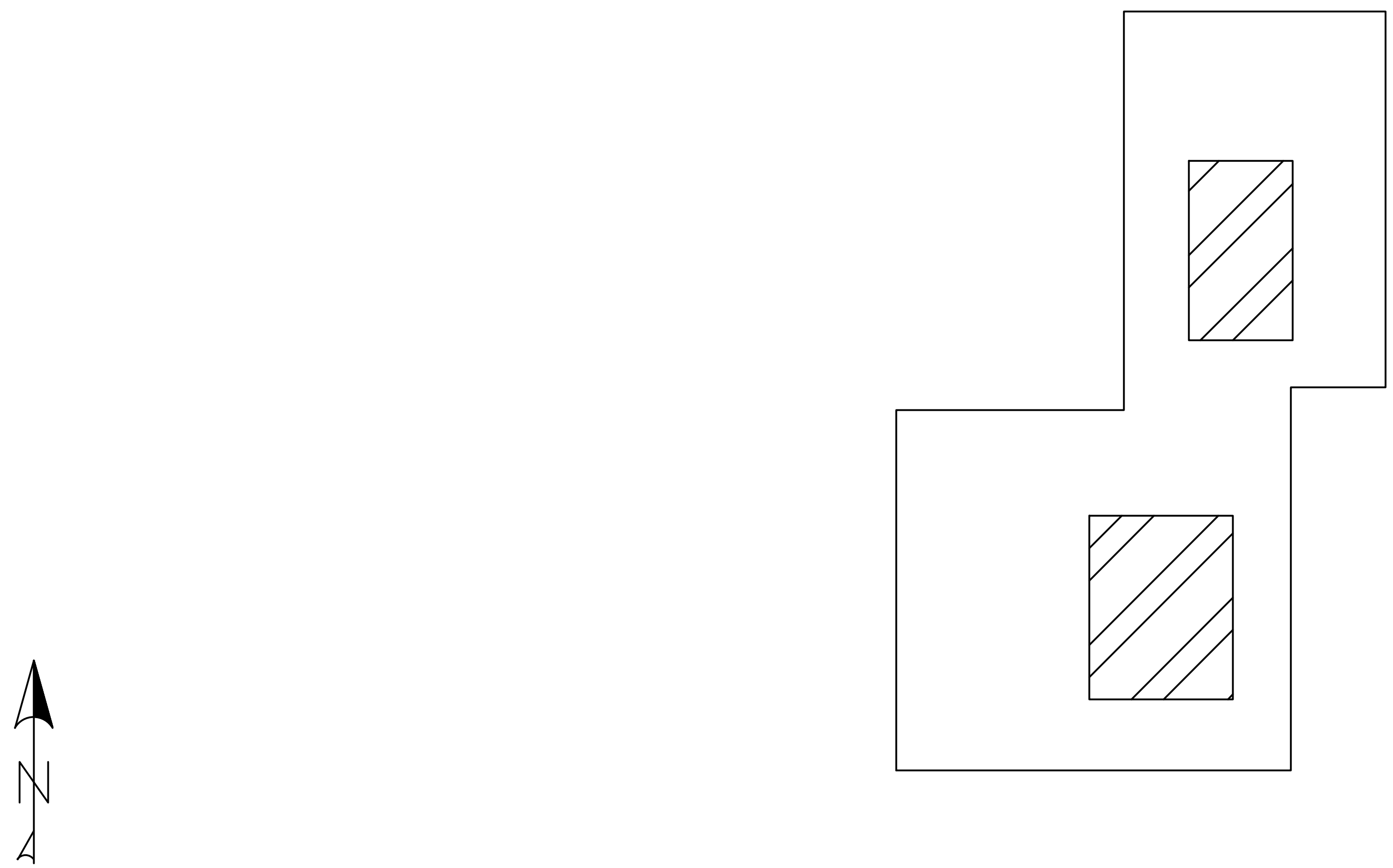
TWENZ ENGINEERING, INC - TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

DETENTION VAULT CROSS-SECTIONS

Class:
CE 419
CAPSTONE II

W5.0

Scale AS SHOWN
Sheet 21 of 23



A
W6.0

GREEN ROOF PLAN VIEW OF PROPOSED AREAS

1/4"=1'

0 1' 2'

LEGEND

HVAC EQUIPMENT

PROPOSED LOCATIONS OF GREEN ROOF

GENERAL NOTES

1. PROPOSED LOCATIONS OF GREEN ROOF SYSTEM
2. PERMEABLE ROOF WILL BE MADE OF GRAVEL
3. THERE WILL BE 16 DRAINS TOTAL ON ROOF LOCATIONS STILL TO BE DETERMINED
4. GREEN ROOF SYSTEM WILL COVER 60% OF SQUARE FOOTAGE OF ROOF
5. HVAC SYSTEMS AND MECHANICAL EQUIPMENT WILL BE SURROUNDED BY PERMEABLE ROOF
6. MORE DETAILS REGARDING TOTAL SQUARE FOOTAGE WILL BE PRESENT IN GROUP DESIGN DRAWINGS

Designed	E. PECKINPAH	4/28/2022
Drawn	E. PECKINPAH	4/28/2022
Checked	E. PECKINPAH	4/28/2022

Assignment GROUP DESIGN DRAWINGS
Submittal Date 5/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

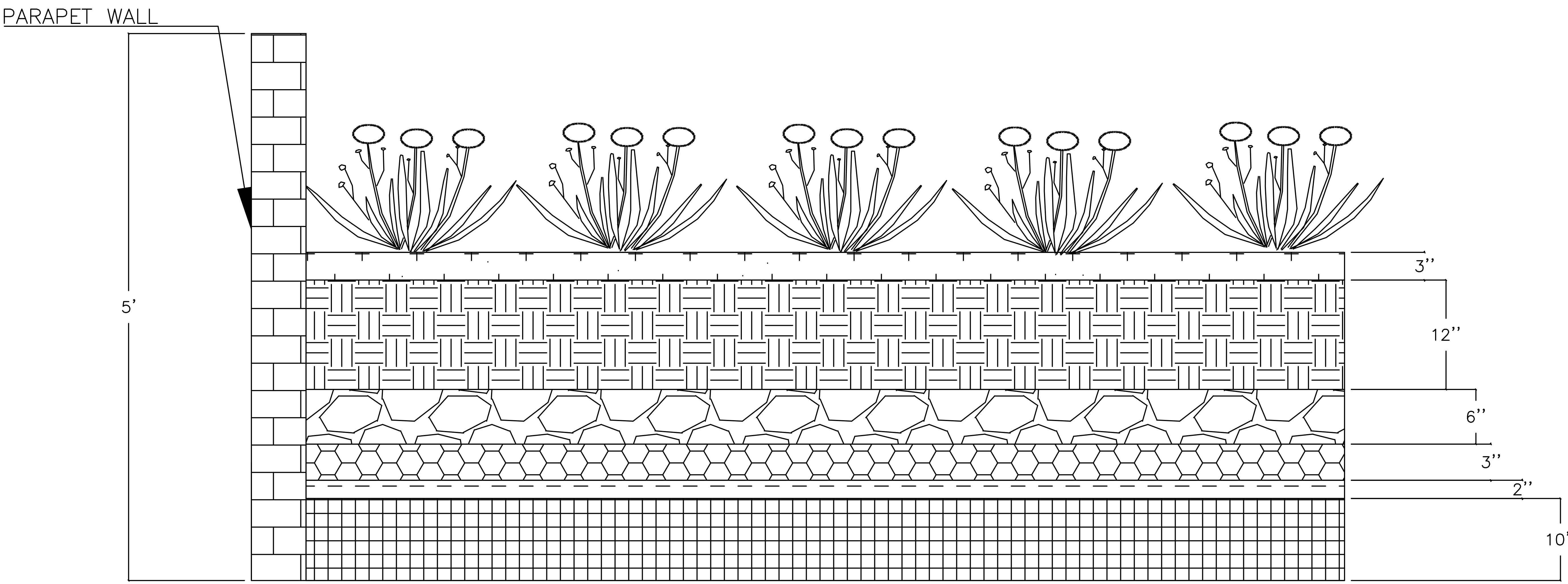
GREEN ROOF PLAN VIEW

TWENZ Engineering Inc.

Class:
ARE 419
CAPSTONE II

W6.0

Scale AS SHOWN
Sheet 22 of 23



LEGEND

- TOP SOIL
- GROWING MEDIUM
- STRUCTURAL ROOF SUPPORT
- FILTER MEMBRANE
- INSULATION
- WATER PROOFING

A
W7.0

GREEN ROOF PROFILE VIEW OF CROSS SECTION

1"=1' 0 1' 2'

GENERAL NOTES:

1. PARAPET WALL WILL BE 5FT TALL
2. FILTRATION PIPES CONNECTING TO DETENTION PIPES STILL TO BE DETERMINED
3. VEGETATION WILL NOT EXCEED PARAPET HEIGHT BY MORE THAN 6 INCHES
4. VEGETATION STILL TO BE DETERMINED
5. MATERIAL OF GREEN ROOF MEMBRANE TO BE DETERMINED

Designed E. PECKINPAH 4/28/2022
Drawn E. PECKINPAH 4/28/2022
Checked E. PECKINPAH 4/28/2022
Assignment GROUP DESIGN DRAWINGS
Submittal Date 05/15/2022

OVERTON STREET DEVELOPMENT
TAX LOT 1945
PORTLAND, OREGON

TWENZ ENGINEERING, INC – TEAM V6
T. HUYNH, N. LIESY, W. MURAVIOR, Z. NEWTON, E. PECKINPAH

GREEN ROOF
CROSS SECTION

Class:
ARE 419
CAPSTONE II

W7.0

Scale AS SHOWN