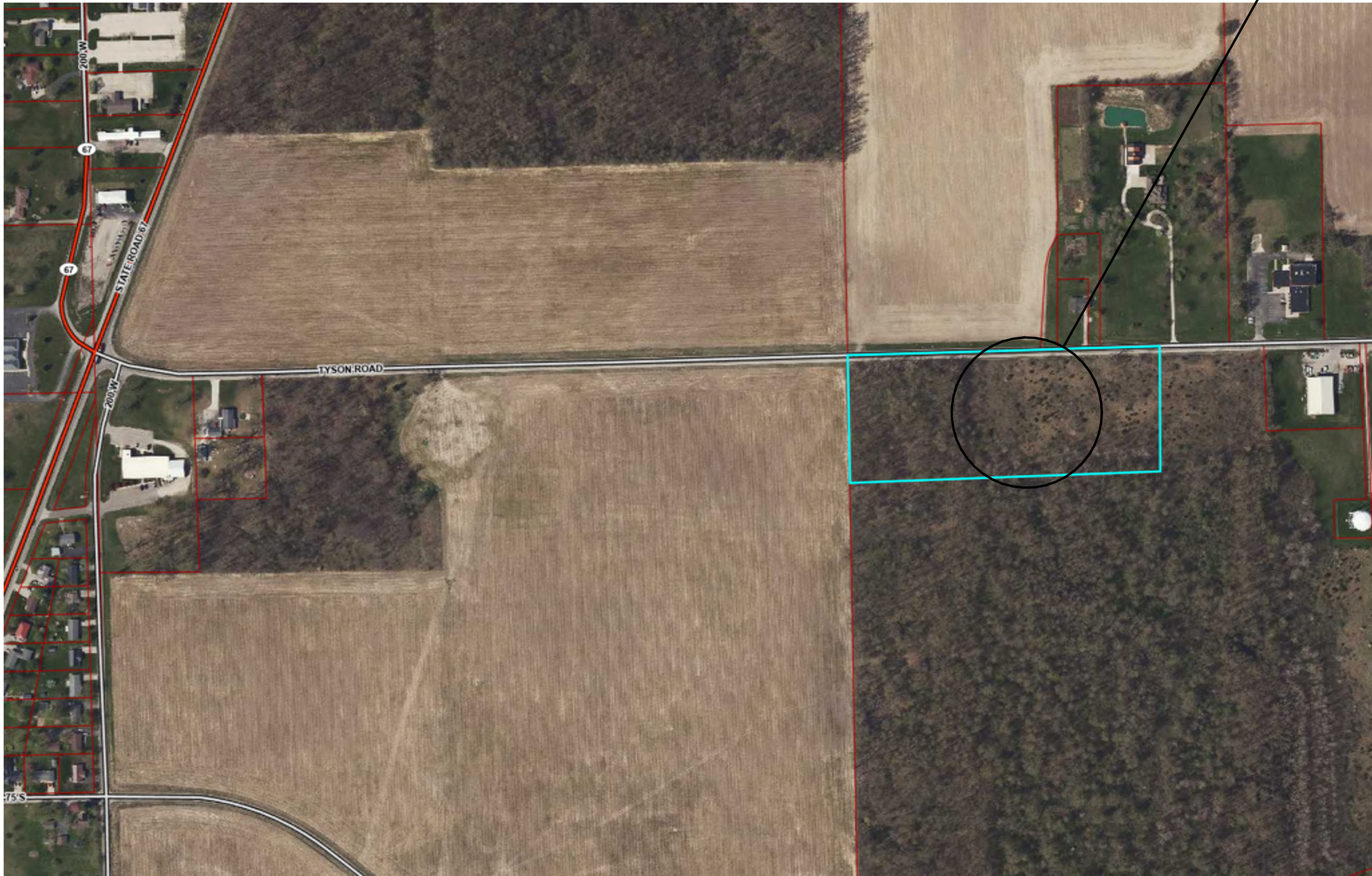


NEW 60' X 140' RECYCLING FACILITY FOR:

JAY COUNTY SOLID WASTE MANAGEMENT DISTRICT

WAYNE TOWNSHIP, JAY COUNTY, INDIANA

THIS DOCUMENT IS TO SERVE FOR "NEW" STRUCTURE DOCUMENTED
HERE-IN ONLY AT ADDRESS LISTED. ALL OTHER STRUCTURAL AND CIVIL
DESIGN OUTSIDE OF THE SCOPE OF THESE DRAWINGS BY OTHERS.



BUILDING DATA

BUILDING USE: WAREHOUSE
OCCUPANCY GROUP: S-1
CONSTRUCTION TYPE: VB
HEIGHT ALLOWED: 40'-00"
ACTUAL HEIGHT: 25'-7"
AREA ALLOWED: 9,000 SQ. FT.
BUILDING AREA: 8,233 SQ. FT.
8,233 < 9,000

SHEET LIST	
SHEET NUMBER	SHEET NAME
T01	COVER PAGE
C01	SITE PLAN
C02	EXISTING CONDITION
C03	PROPOSED SURFACE
C04	DRAINAGE PLAN & UTILITIES
C05	EROSION CONTROL
C06	EROSION CONTROL DETAILS
C07	UTILITY DETAILS
C08	UTILITY DETAILS (CONT.)
C09	DRAWING DETAIL
F01	FOUNDATION PLAN
F02	FOUNDATION DETAILS
F03	TRUCK RAMP FOUNDATION DETAILS
F04	BOLLARD FOOTING DETAILS
F05	CONCRETE NOTES
A01	FLOOR PLAN
A02	FIRE & LIFE SAFETY PLAN
A03	SECTION VIEWS & DETAILS
A04	SECTION VIEWS & DETAILS (CONT.)
A05	ADA BATHROOM SECTION VIEWS & DETAILS
A06	ROOF FRAMING PLAN
A07	ELEVATIONS
E01	ELECTRICAL PLAN
E02	ELECTRICAL PANEL
M01	MECHANICAL PLAN
P01	PLUMBING PLAN
P02	PLUMBING ISOMETRIC
G01	GENERAL NOTES

DESIGN LOADS

BUILDING CODE:
2012 INTERNATIONAL BUILDING CODE
2014 INDIANA BUILDING CODE

A) SNOW LOADS:
I) GROUND SNOW (p/g).....20 PSF
II) DRIFTING SNOW ON LOWER ROOF
(*TRUSS DESIGNER SHALL ACCOUNT FOR SNOW DRIFT
REQUIREMENTS*).....SEE DETAIL 2/A03 & 2/A04

B) ROOF LOADS:
I) ROOF LIVE.....20 PSF
II) DEAD LOAD.....8 PSF
III) COLLATERAL LOAD.....2 PSF

C) FLOOR LOADS:
I) LIVE LOAD:
i) STORAGE AREAS.....125 PSF
II) DEAD LOAD.....10 PSF

D) WIND LOAD:
115 MPH
CAT. II
EXPOSURE C

MSS Engineering, LLC

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414 W 5th St., Auburn, IN 46706

Phone: (260) 267-7414

Email: tamcdaniel@mssengineer.com

Travis A. McDaniel, PE

TRAVIS A. MCDANIEL

REGISTERED

PE11800805

STATE OF INDIANA

PROFESSIONAL ENGINEER

Travis A. McDaniel

03/11/2026

PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
COVER PAGE

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
2	1/15/26	REVISED BUILDING HEIGHT	HN
1	1/15/26	ADDED MECHANICAL & PLUMBING PLANS	HN

JOB NUMBER:
25.484.071

DRAWN BY: TAM	ENGINEERED BY: TAM
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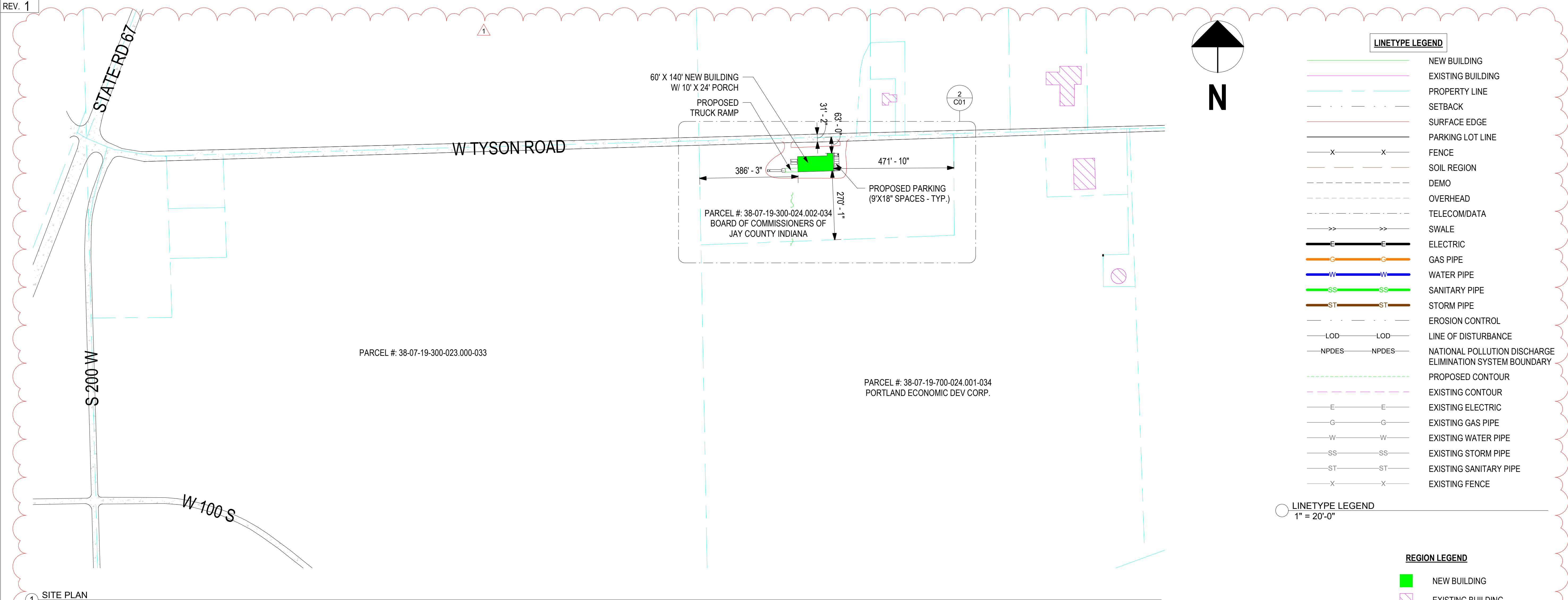
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PROGRESS DATE:

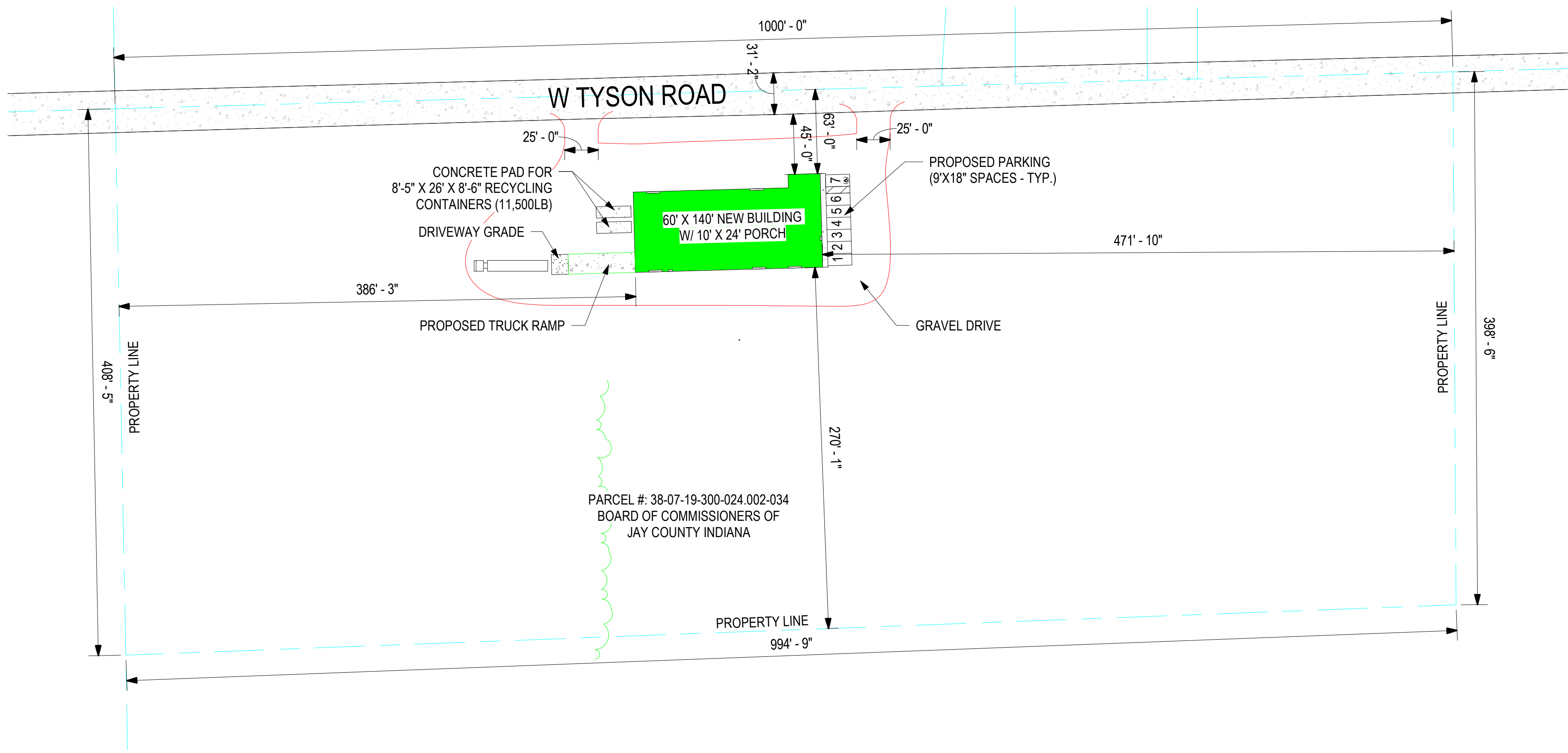
CERTIFIED DATE: 03/11/26

SCALE:

PAGE NUMBER:



1 SITE PLAN
1" = 200'-0"



REGION LEGEND

- NEW BUILDING
- EXISTING BUILDING
- DRIVEWAY/SIDEWALKS/ROADS
- WATER
- RIP RAP
- TEMPORARY SEEDING
- PERMANENT SEEDING
- ZONE AE (FLOODWAY)
- ZONE AE

REGION LEGEND

1/4" = 1'-0"

NOTE: DIMENSIONS ARE APPROXIMATE. REFER TO
PROFESSIONAL SURVEY FOR PRECISE LOT LINE
LAYOUT. INFORMATION PROVIDED GATHERED
FROM PUBLIC RECORDS.

2 ENLARGED SITE PLAN
1" = 60'-0"

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Travis A. McDaniel, PE



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
SITE PLAN

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	3/11/26	UPDATED DRIVEWAY & AREA OF TREES TO BE REMOVED ON CIVIL PLANS	HN

JOB NUMBER:
25.484.071

DRAWN BY: TAM
ENGINEERED BY: TAM

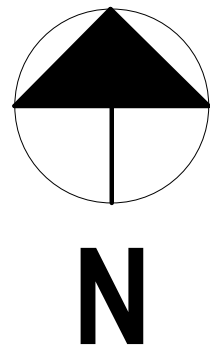
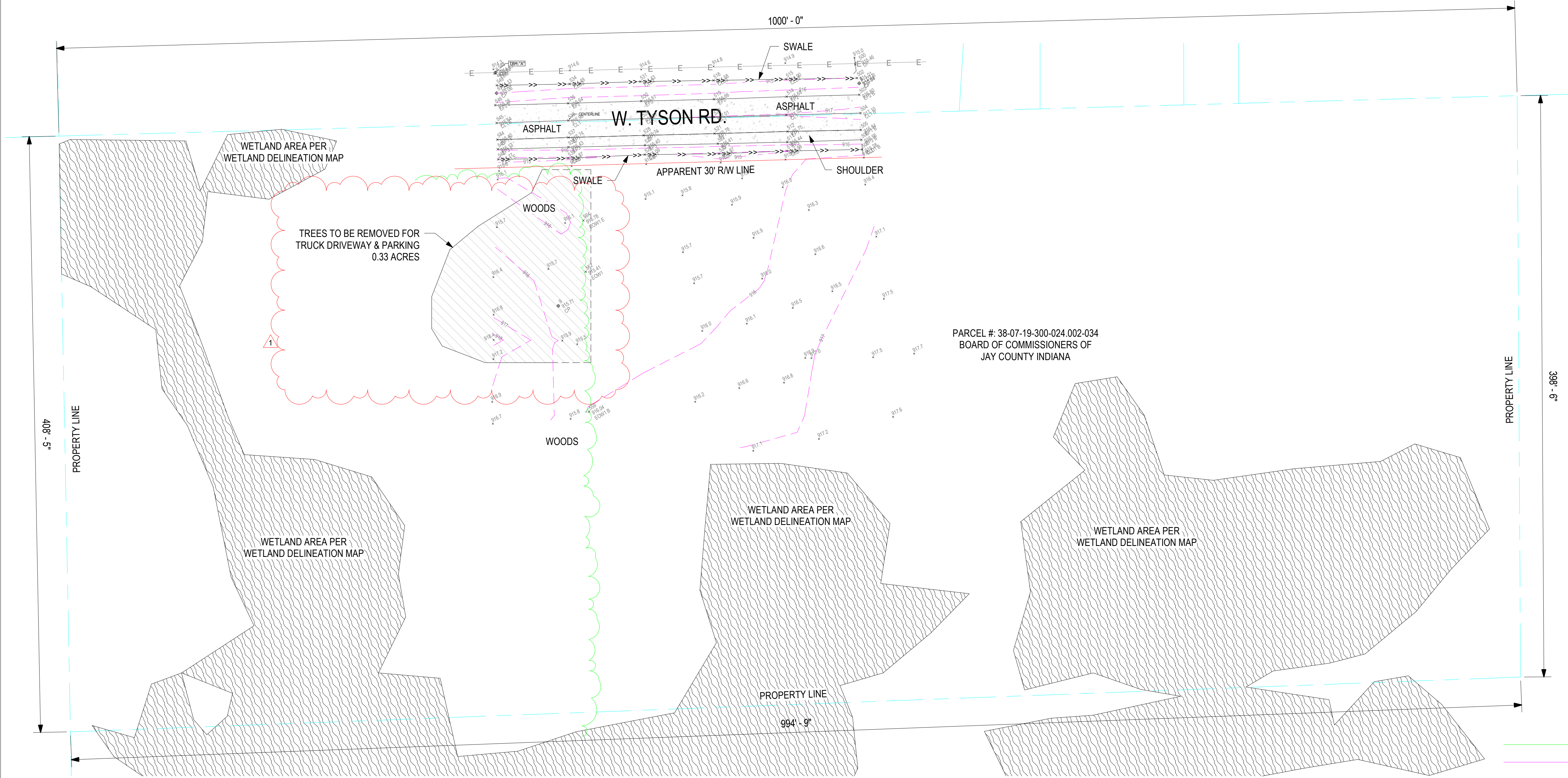
START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:



1 EXISTING CONDITIONS
1" = 40'-0"

- REGION LEGEND**
- NEW BUILDING
 - EXISTING BUILDING
 - DRIVEWAY/SIDEWALKS/ROADS
 - WATER
 - RIP RAP
 - TEMPORARY SEEDING
 - PERMANENT SEEDING
 - ZONE AE (FLOODWAY)
 - ZONE AE

1/4" = 1'-0"

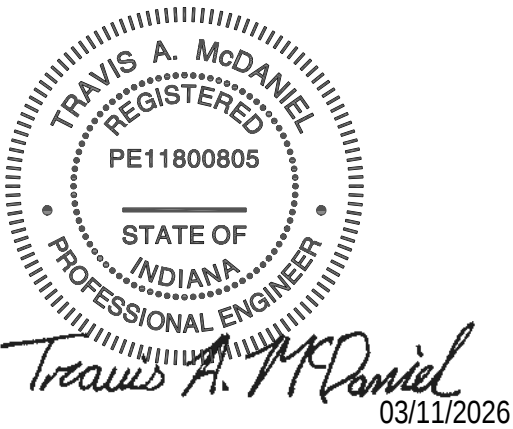
- SYMBOL LEGEND**
- MANHOLE
 - DRYWELL
 - SANITARY SEWER CLEANOUT
 - WATER VALVE
 - GAS VALVE
 - FIRE HYDRANT
 - SPOT ELEVATION
 - SIGN POST
 - LIGHT POST
 - SPRINKLER
 - BOLLARD
 - DOWNSPOUT
 - DECIDUOUS TREE
 - UTILITY POLE
 - GUY ANCHOR
 - LIGHT POLE w. MAST ARM

1/4" = 1'-0"

- LINETYPE LEGEND**
- NEW BUILDING
 - EXISTING BUILDING
 - PROPERTY LINE
 - SETBACK
 - SURFACE EDGE
 - PARKING LOT LINE
 - FENCE
 - SOIL REGION
 - DEMO
 - OVERHEAD
 - TELECOM/DATA
 - SWALE
 - ELECTRIC
 - GAS PIPE
 - WATER PIPE
 - SANITARY PIPE
 - STORM PIPE
 - EROSION CONTROL
 - LINE OF DISTURBANCE
 - NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM BOUNDARY
 - PROPOSED CONTOUR
 - EXISTING CONTOUR
 - EXISTING ELECTRIC
 - EXISTING GAS PIPE
 - EXISTING WATER PIPE
 - EXISTING STORM PIPE
 - EXISTING SANITARY PIPE
 - EXISTING FENCE

1" = 20'-0"

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Travis A. McDaniel, PE



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
EXISTING CONDITION

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	3/11/26	UPDATED DRIVEWAY & AREA OF TREES TO BE REMOVED ON CIVIL PLANS	HN

JOB NUMBER:
25,484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

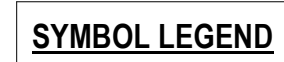
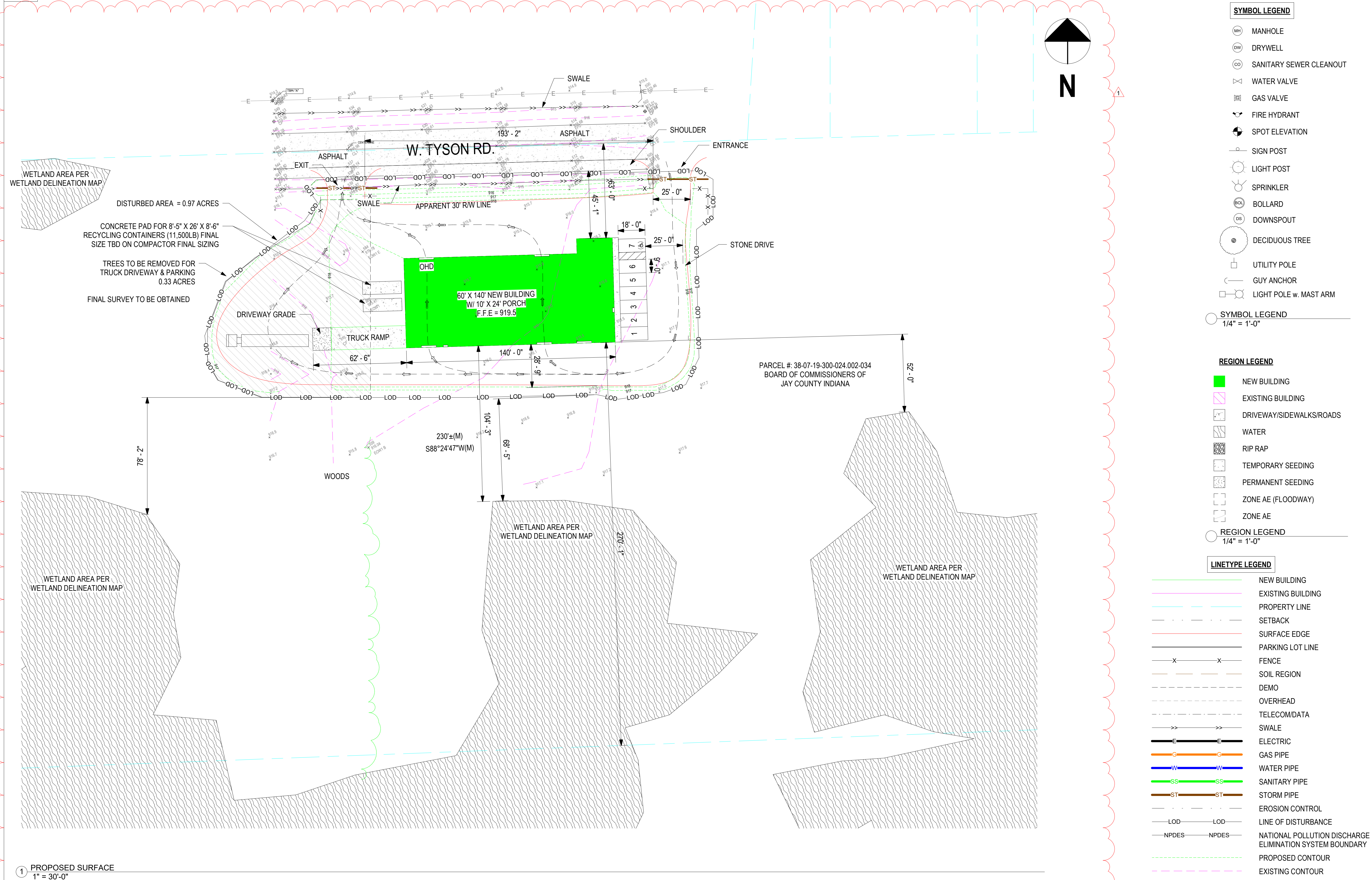
START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:



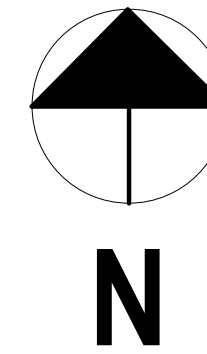
- | | |
|---|--------------------------------------|
|  | MANHOLE |
|  | DRYWELL |
|  | SANITARY SEWER CLEANOUT |
|  | WATER VALVE |
|  | GAS VALVE |
|  | FIRE HYDRANT |
|  | SPOT ELEVATION |
|  | SIGN POST |
|  | LIGHT POST |
|  | SPRINKLER |
|  | BOLLARD |
|  | DOWNSPOUT |
|  | DECIDUOUS TREE |
|  | UTILITY POLE |
|  | GUY ANCHOR |
|  | LIGHT POLE w. MAST ARM |
|  | SYMBOL LEGEND
1/4" = 1'-0" |

REGION LEGEND

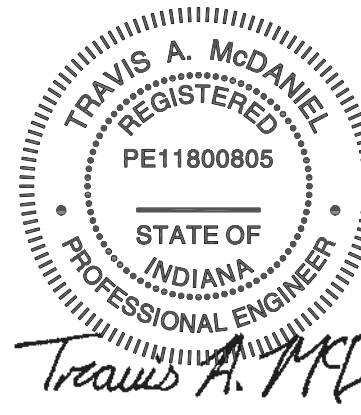
-  NEW BUILDING
-  EXISTING BUILDING
-  DRIVEWAY/SIDEWALKS/ROADS
-  WATER
-  RIP RAP
-  TEMPORARY SEEDING
-  PERMANENT SEEDING
-  ZONE AE (FLOODWAY)
-  ZONE AE

LINETYPE LEGEND

- | | |
|--|---|
| | NEW BUILDING |
| | EXISTING BUILDING |
| | PROPERTY LINE |
| | SETBACK |
| | SURFACE EDGE |
| | PARKING LOT LINE |
| | FENCE |
| | SOIL REGION |
| | DEMO |
| | OVERHEAD |
| | TELECOM/DATA |
| | SWALE |
| | ELECTRIC |
| | GAS PIPE |
| | WATER PIPE |
| | SANITARY PIPE |
| | STORM PIPE |
| | EROSION CONTROL |
| | LINE OF DISTURBANCE |
| | NATIONAL POLLUTION DISCHARGE
ELIMINATION SYSTEM BOUNDARY |
| | PROPOSED CONTOUR |
| | EXISTING CONTOUR |
| | EXISTING ELECTRIC |
| | EXISTING GAS PIPE |
| | EXISTING WATER PIPE |
| | EXISTING STORM PIPE |
| | EXISTING SANITARY PIPE |
| | EXISTING FENCE |



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Travis A. McDaniel, PE



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
PROPOSED SURFACE

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	3/11/26	UPDATED DRIVEWAY & AREA OF TREES TO BE REMOVED ON CIVIL PLANS	HN

JOB NUMBER:
25.484.071

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BY: TAM

**ENGINEERED
BY: TAM**

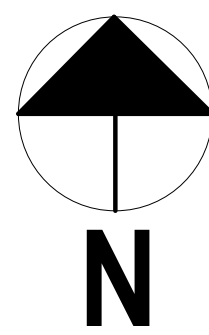
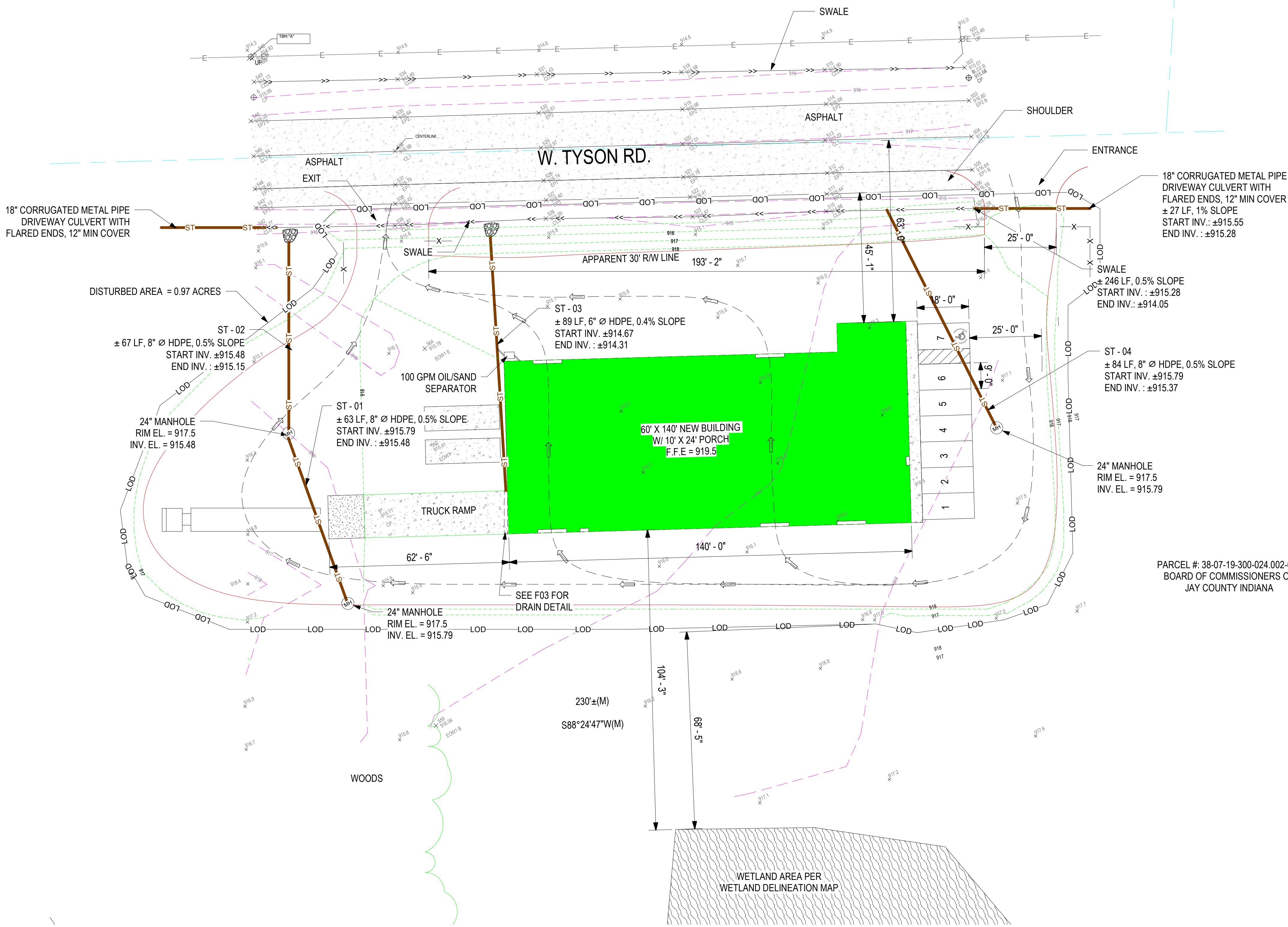
START DATE:	06/03/25
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PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:



SYMBOL LEGEND

- MANHOLE
 - DRYWELL
 - SANITARY SEWER CLEANOUT
 - WATER VALVE
 - GAS VALVE
 - FIRE HYDRANT
 - SPOT ELEVATION
 - SIGN POST
 - LIGHT POST
 - SPRINKLER
 - BOLLARD
 - DOWNSPOUT
 - DECIDUOUS TREE
 - UTILITY POLE
 - GUY ANCHOR
 - LIGHT POLE w. MAST ARM
- SYMBOL LEGEND**
1/4" = 1'-0"

REGION LEGEND

- NEW BUILDING
 - EXISTING BUILDING
 - DRIVEWAY/SIDEWALKS/ROADS
 - WATER
 - RIP RAP
 - TEMPORARY SEEDING
 - PERMANENT SEEDING
 - ZONE AE (FLOODWAY)
 - ZONE AE
- REGION LEGEND**
1/4" = 1'-0"

LINETYPE LEGEND

- NEW BUILDING
- EXISTING BUILDING
- PROPERTY LINE
- SETBACK
- SURFACE EDGE
- PARKING LOT LINE
- FENCE
- SOIL REGION
- DEMO
- OVERHEAD
- TELECOM/DATA
- SWALE
- ELECTRIC
- GAS PIPE
- WATER PIPE
- SANITARY PIPE
- STORM PIPE
- EROSION CONTROL
- LINE OF DISTURBANCE
- NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM BOUNDARY
- PROPOSED CONTOUR
- EXISTING CONTOUR
- EXISTING ELECTRIC
- EXISTING GAS PIPE
- EXISTING WATER PIPE
- EXISTING STORM PIPE
- EXISTING SANITARY PIPE
- EXISTING FENCE

LINETYPE LEGEND
1" = 20'-0"

1 DRAINAGE PLAN & UTILITIES
1" = 20'-0"

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Travis A. McDaniel, PE



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
DRAINAGE PLAN &
UTILITIES

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	3/11/26	UPDATED DRIVEWAY & AREA OF TREES TO BE REMOVED ON CIVIL PLANS	HN

JOB NUMBER:
25,484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

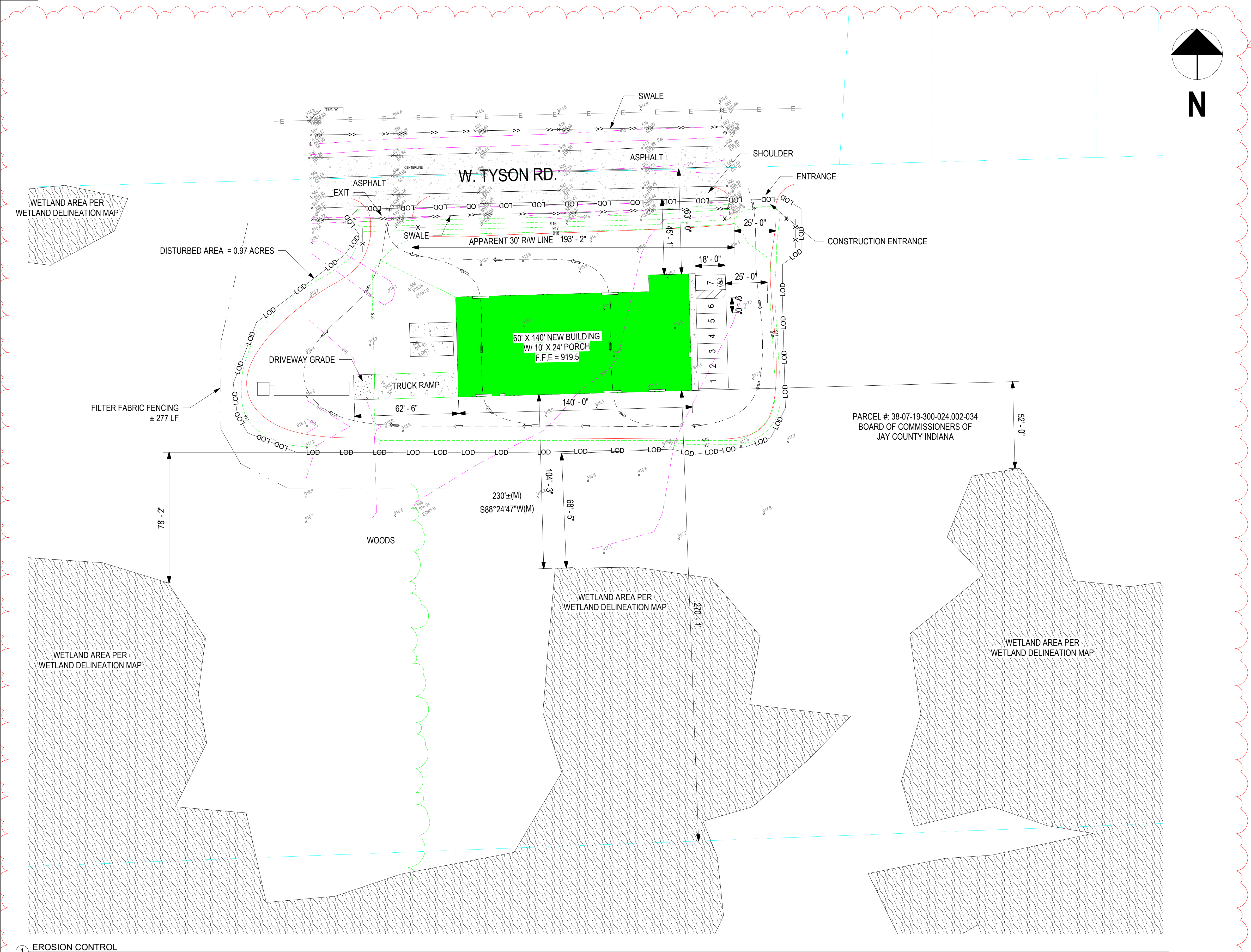
START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:



1 EROSION CONTROL
1" = 30'-0"

SYMBOL LEGEND

- MANHOLE
- DRYWELL
- SANITARY SEWER CLEANOUT
- WATER VALVE
- GAS VALVE
- FIRE HYDRANT
- SPOT ELEVATION
- SIGN POST
- LIGHT POST
- SPRINKLER
- BOLLARD
- DOWNSPOUT
- DECIDUOUS TREE
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE w. MAST ARM

SYMBOL LEGEND
1/4" = 1'-0"

REGION LEGEND

- NEW BUILDING
- EXISTING BUILDING
- DRIVEWAY/SIDEWALKS/ROADS
- WATER
- RIP RAP
- TEMPORARY SEEDING
- PERMANENT SEEDING
- ZONE AE (FLOODWAY)
- ZONE AE

REGION LEGEND
1/4" = 1'-0"

LINETYPE LEGEND

- NEW BUILDING
- EXISTING BUILDING
- PROPERTY LINE
- SETBACK
- SURFACE EDGE
- PARKING LOT LINE
- FENCE
- SOIL REGION
- DEMO
- OVERHEAD
- TELECOM/DATA
- SWALE
- ELECTRIC
- GAS PIPE
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- STORM PIPE
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- LINE OF DISTURBANCE
- NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM BOUNDARY
- PROPOSED CONTOUR
- EXISTING CONTOUR
- EXISTING ELECTRIC
- EXISTING GAS PIPE
- EXISTING WATER PIPE
- EXISTING STORM PIPE
- EXISTING SANITARY PIPE
- EXISTING FENCE

LINETYPE LEGEND
1" = 20'-0"

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PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
EROSION CONTROL

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	3/11/26	UPDATED DRIVEWAY & AREA OF TREES TO BE REMOVED ON CIVIL PLANS	HN

JOB NUMBER:
25,484.071

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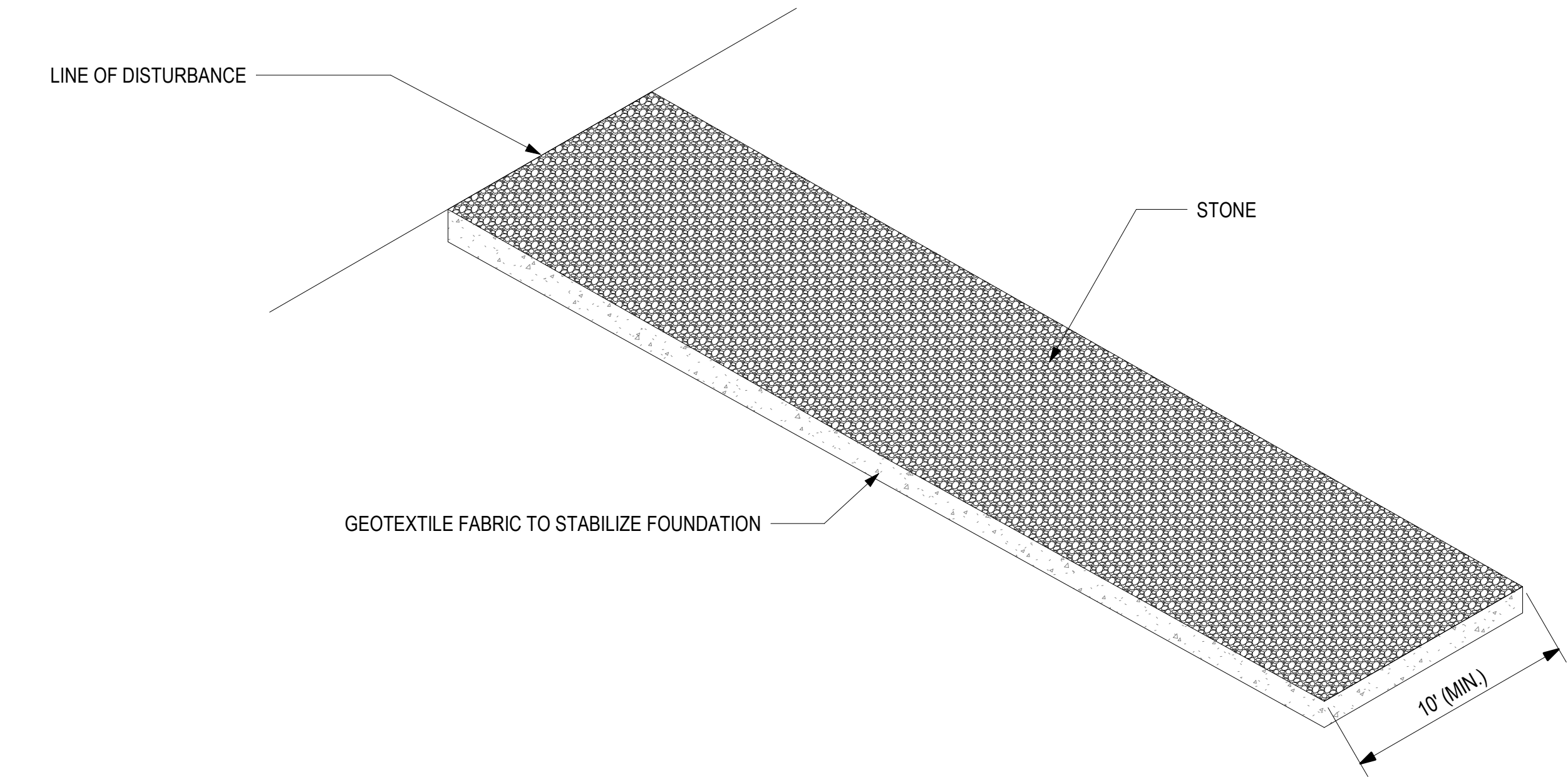
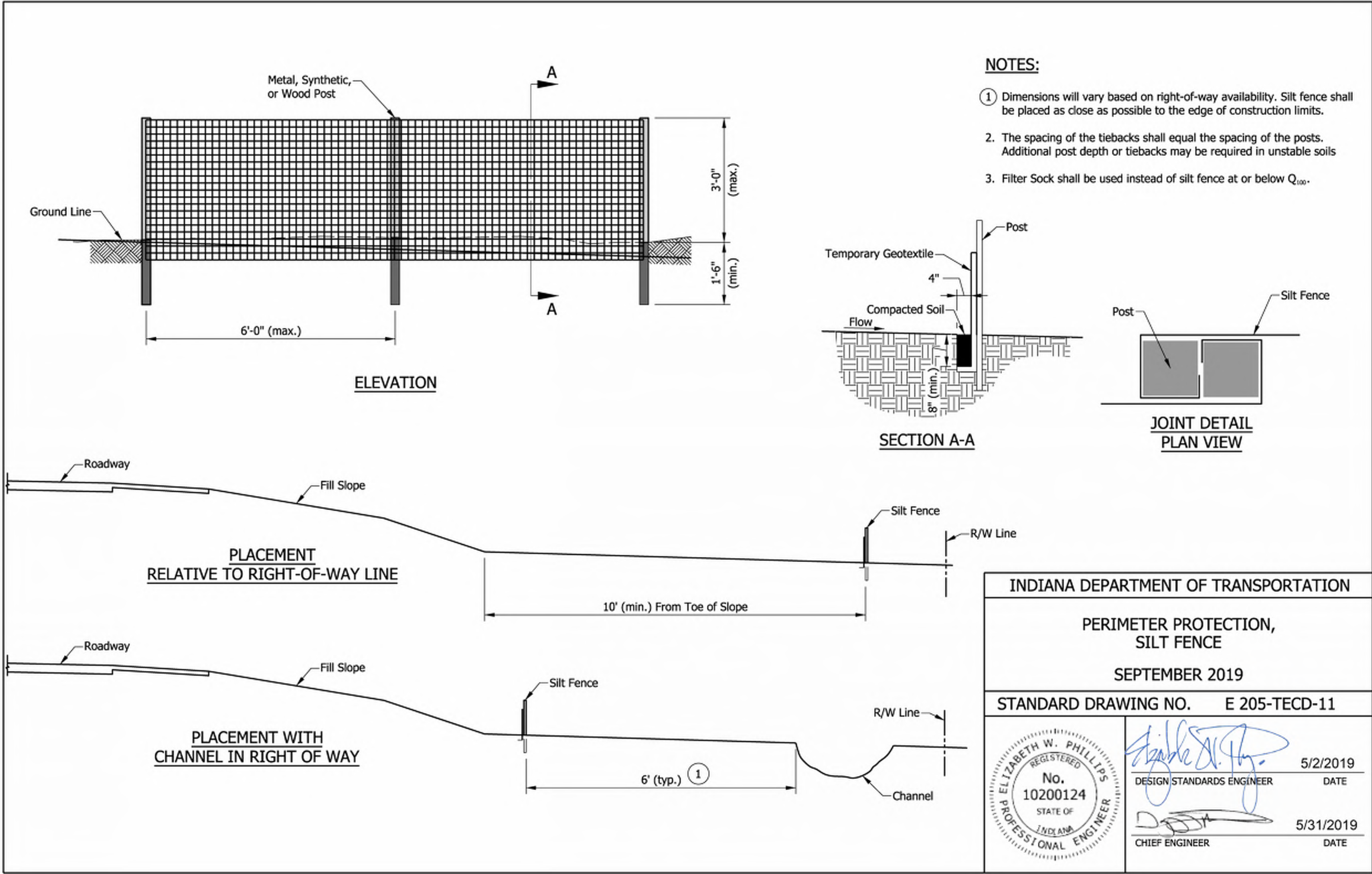
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PROGRESS DATE:

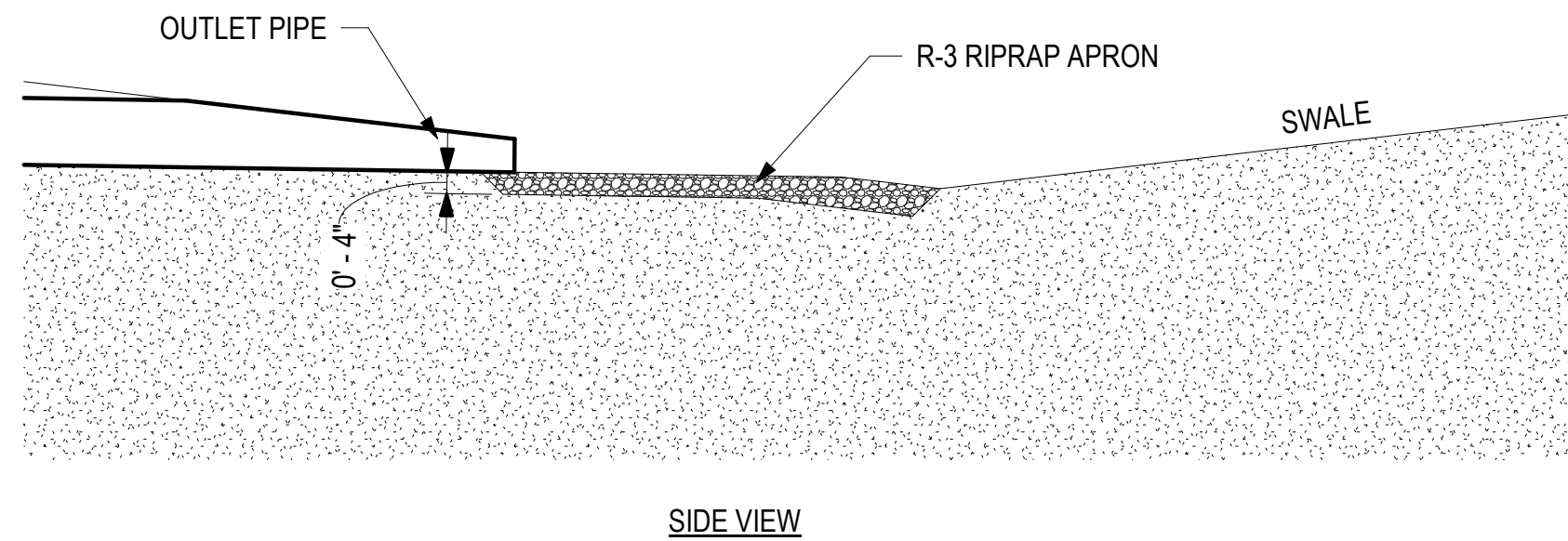
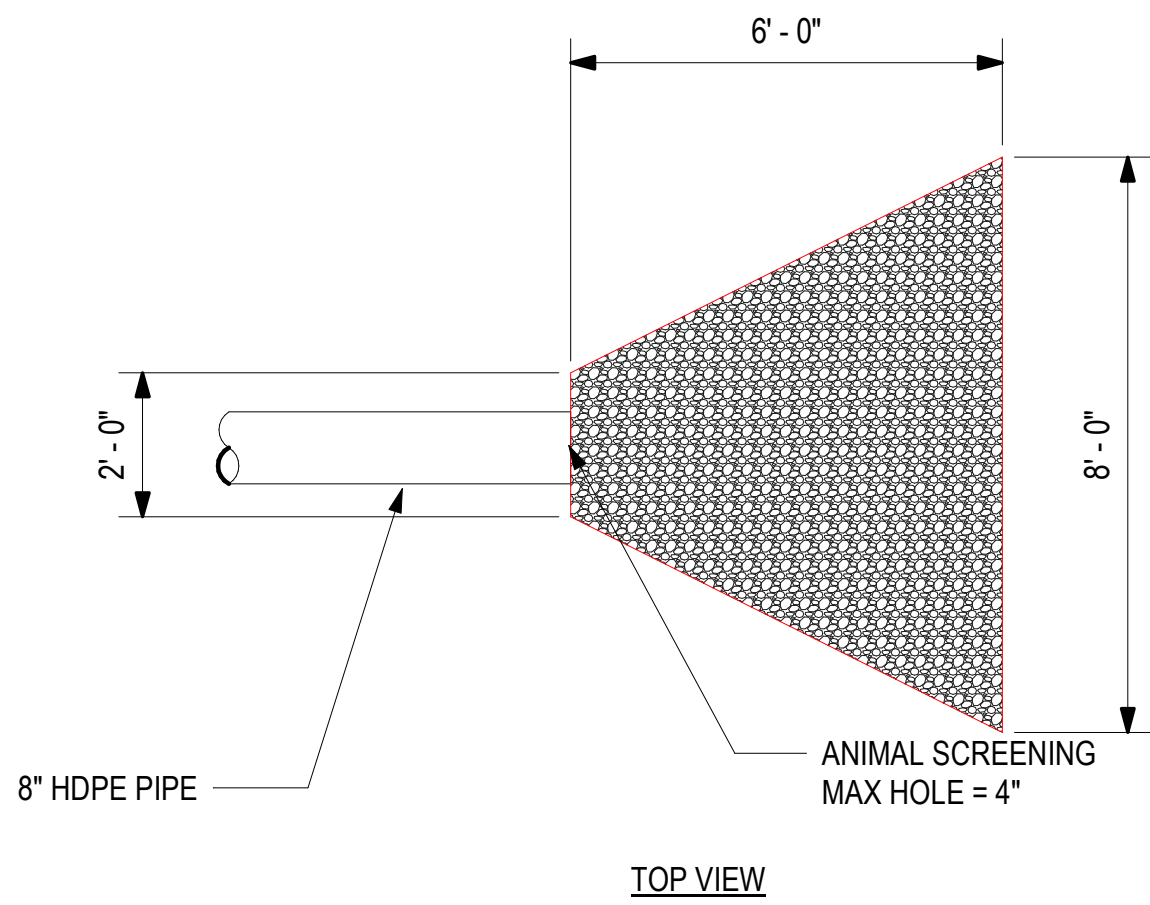
CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:



① TEMPORARY STONE CONSTRUCTION ENTRANCE
3/8" = 1'-0"



② RIPRAP APRON DETAILS
3/8" = 1'-0"



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
EROSION CONTROL
DETAILS

REVISIONS:

NO.	DATE	DESCRIPTION	BY
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JOB NUMBER:
25.484.071

DRAWN BY: TAM

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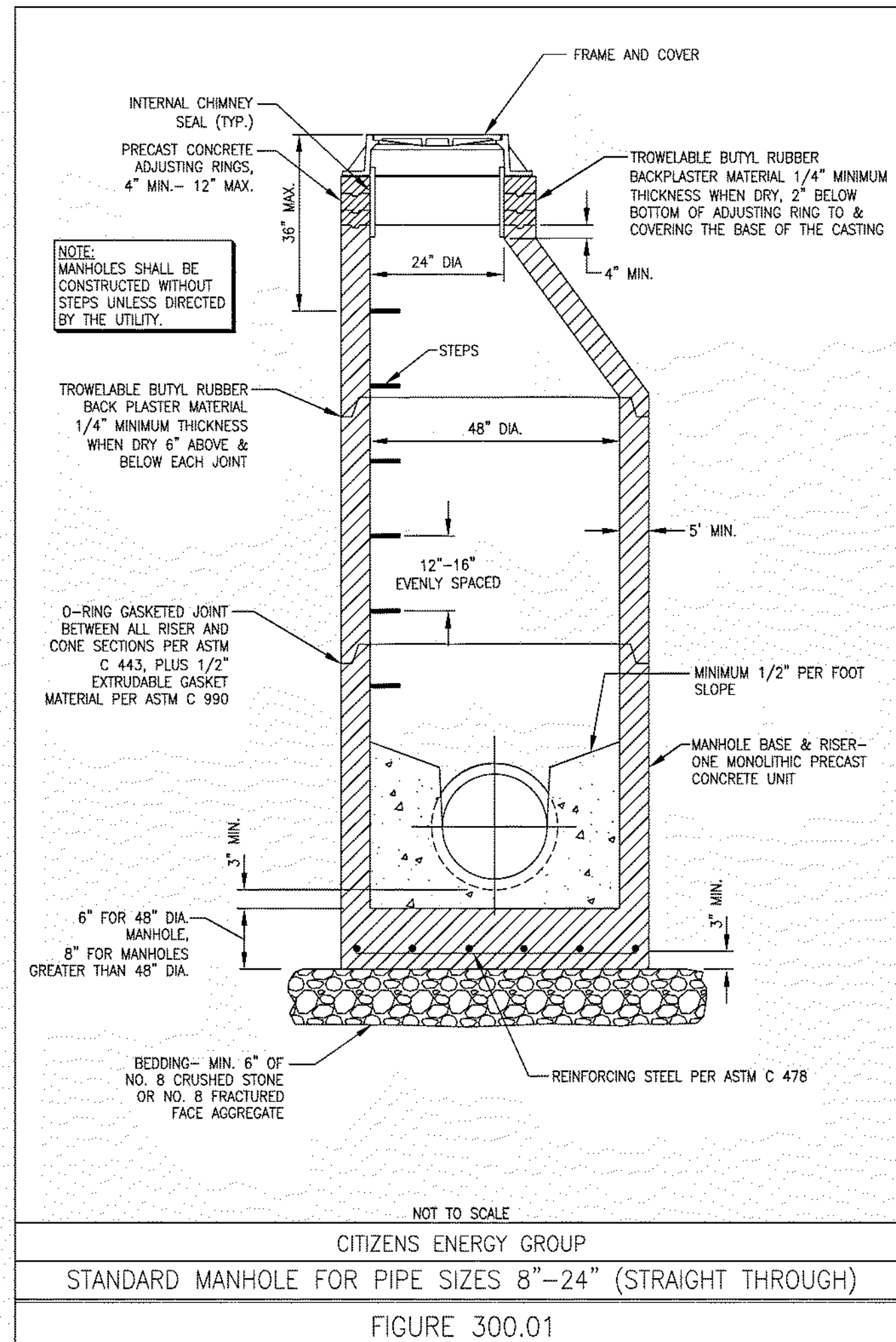
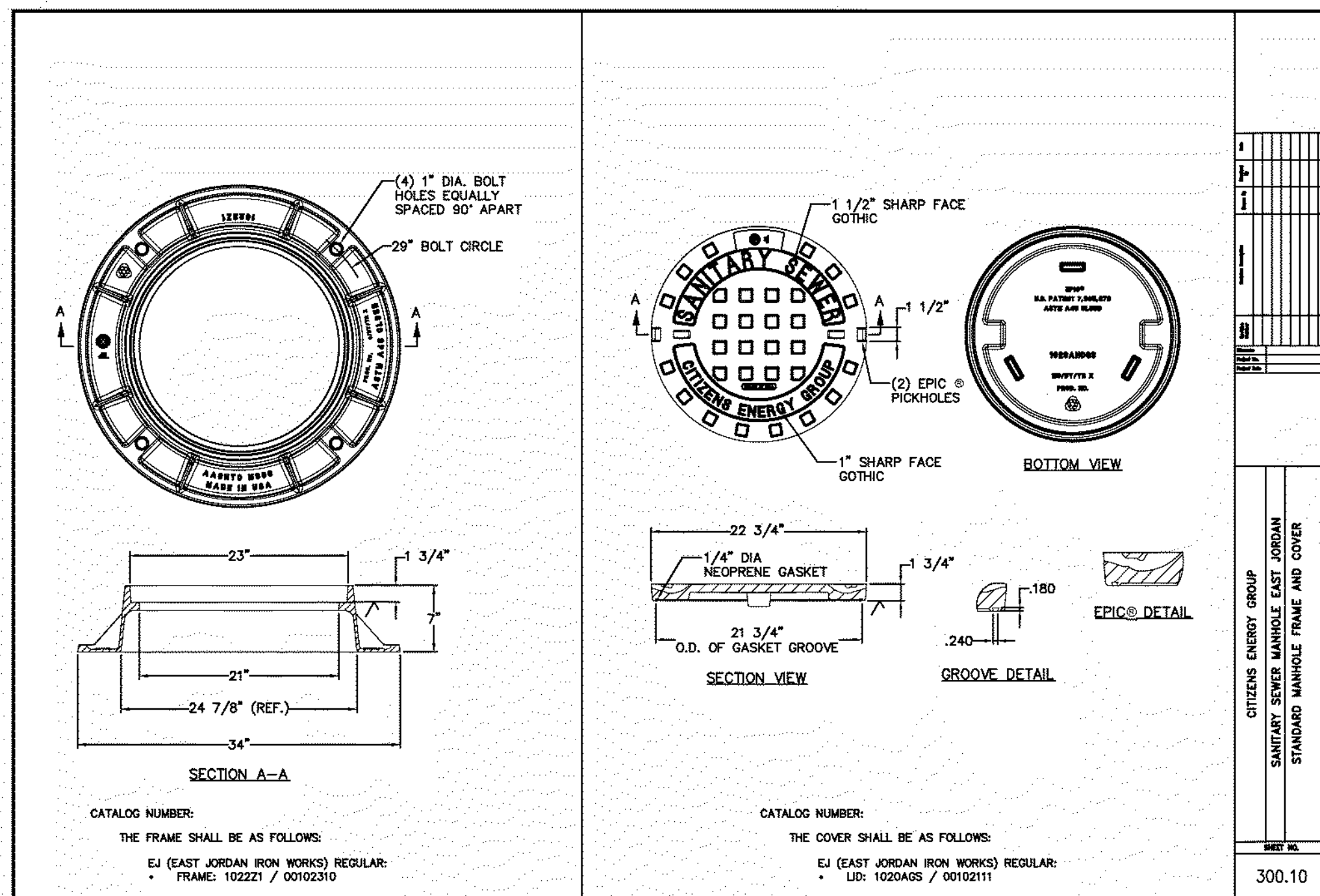
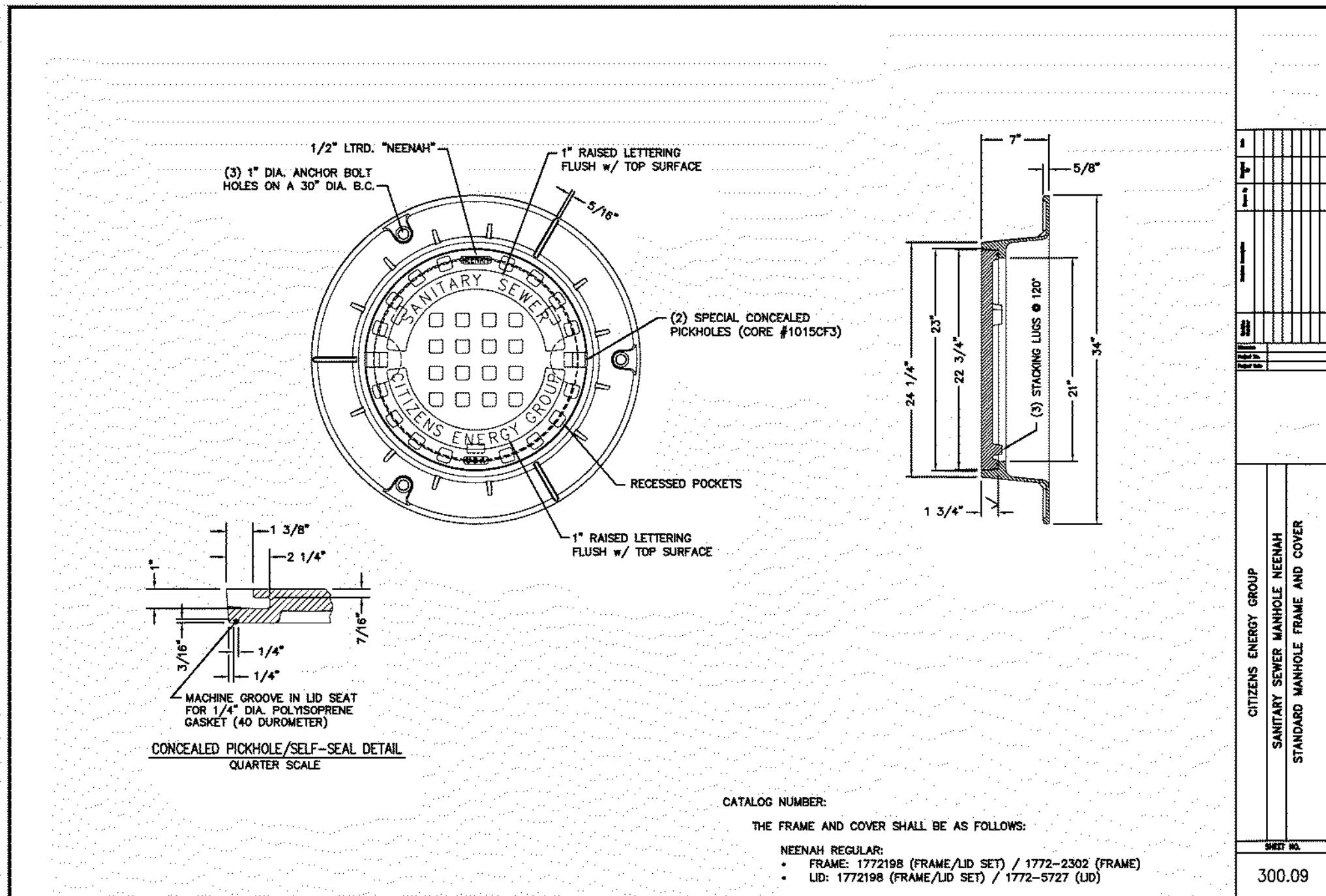
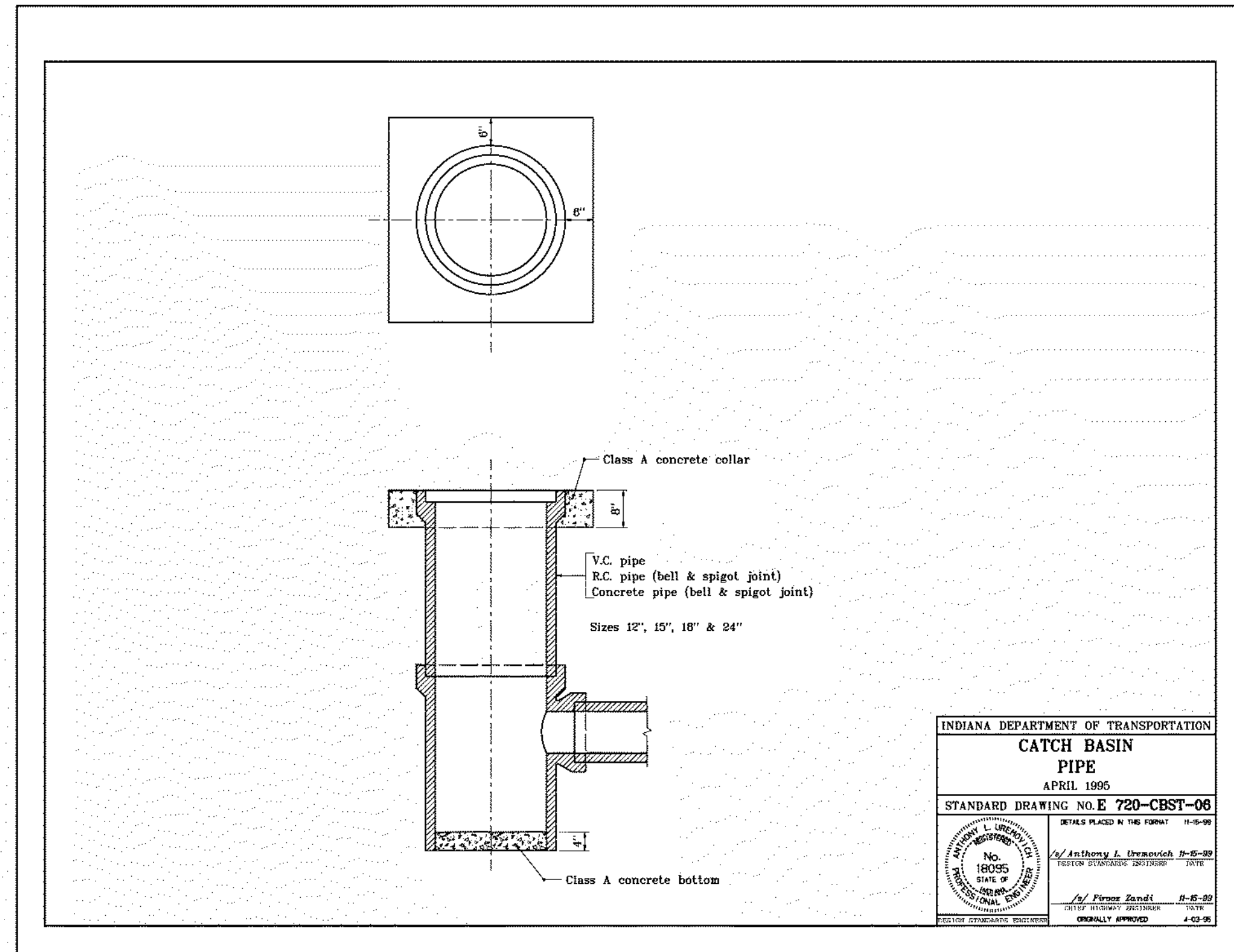
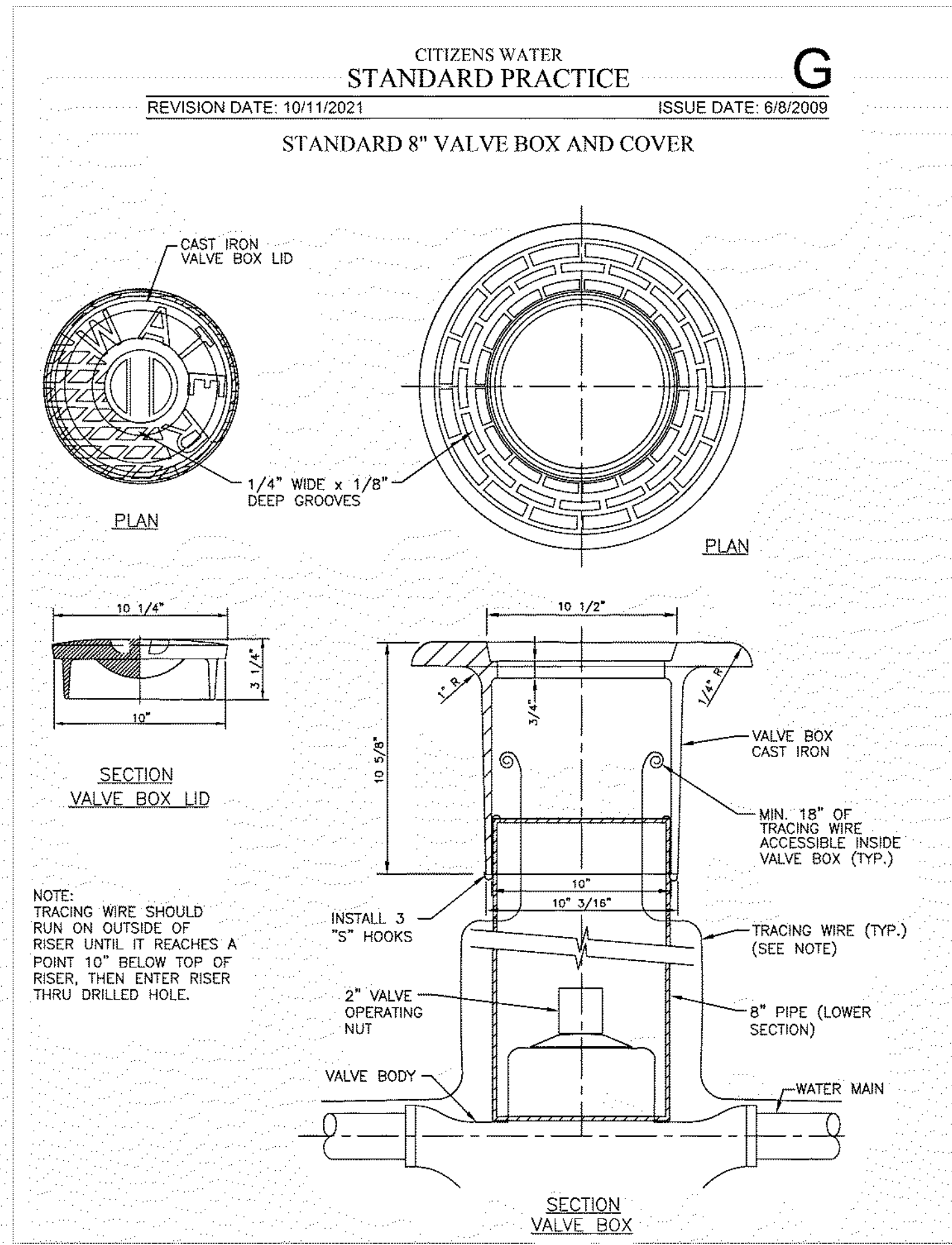
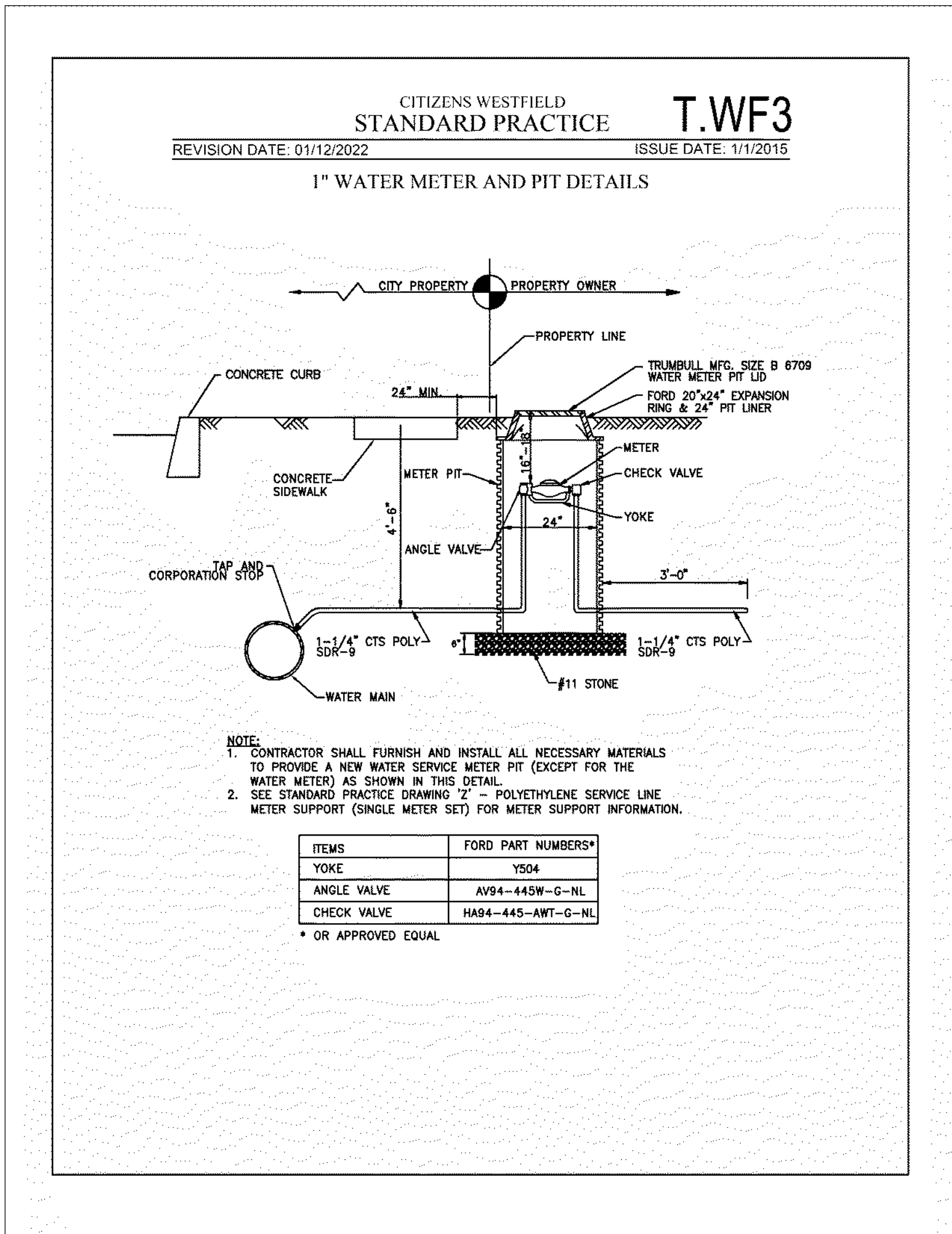
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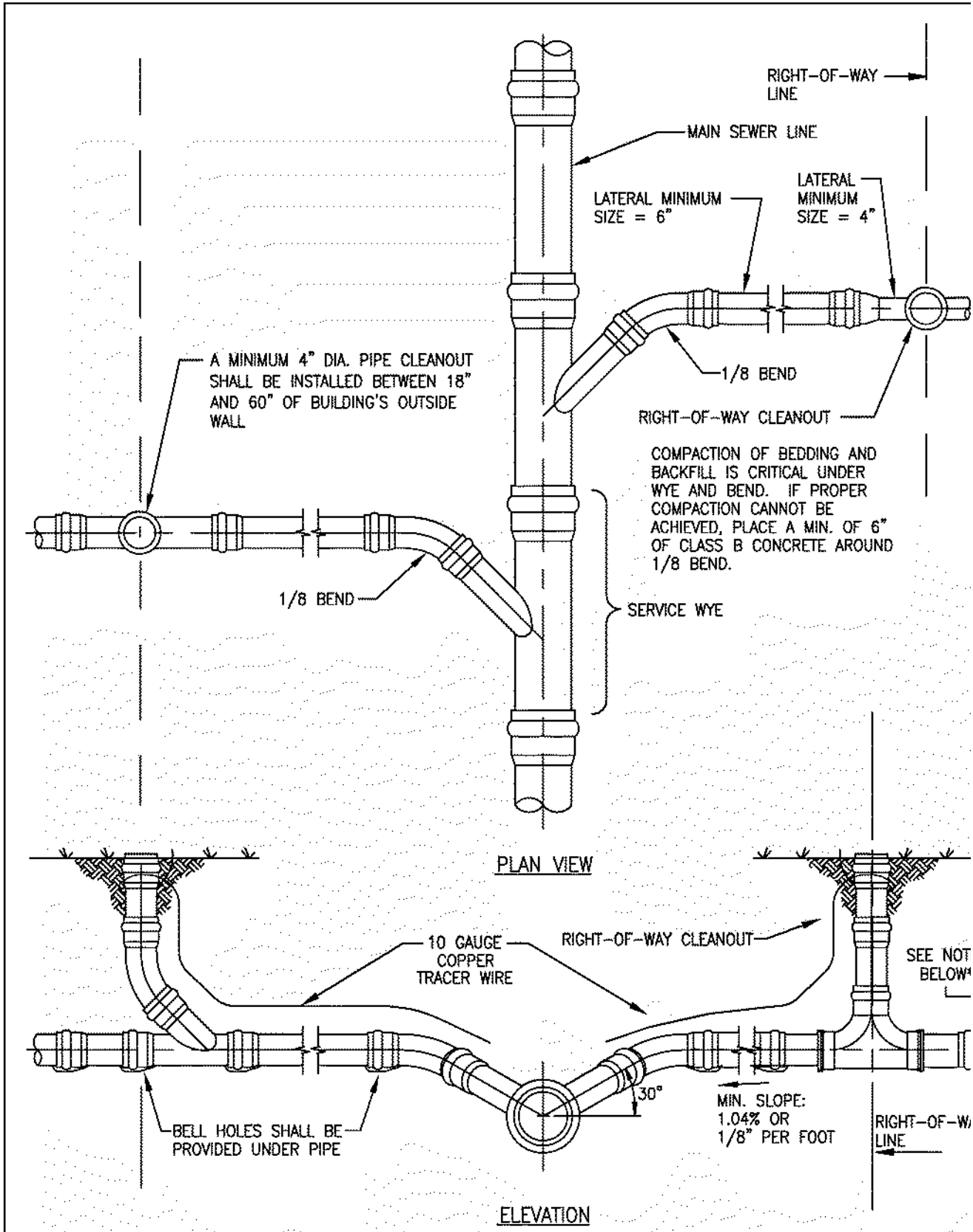
PROGRESS DATE:

CERTIFIED DATE: 03/11/26

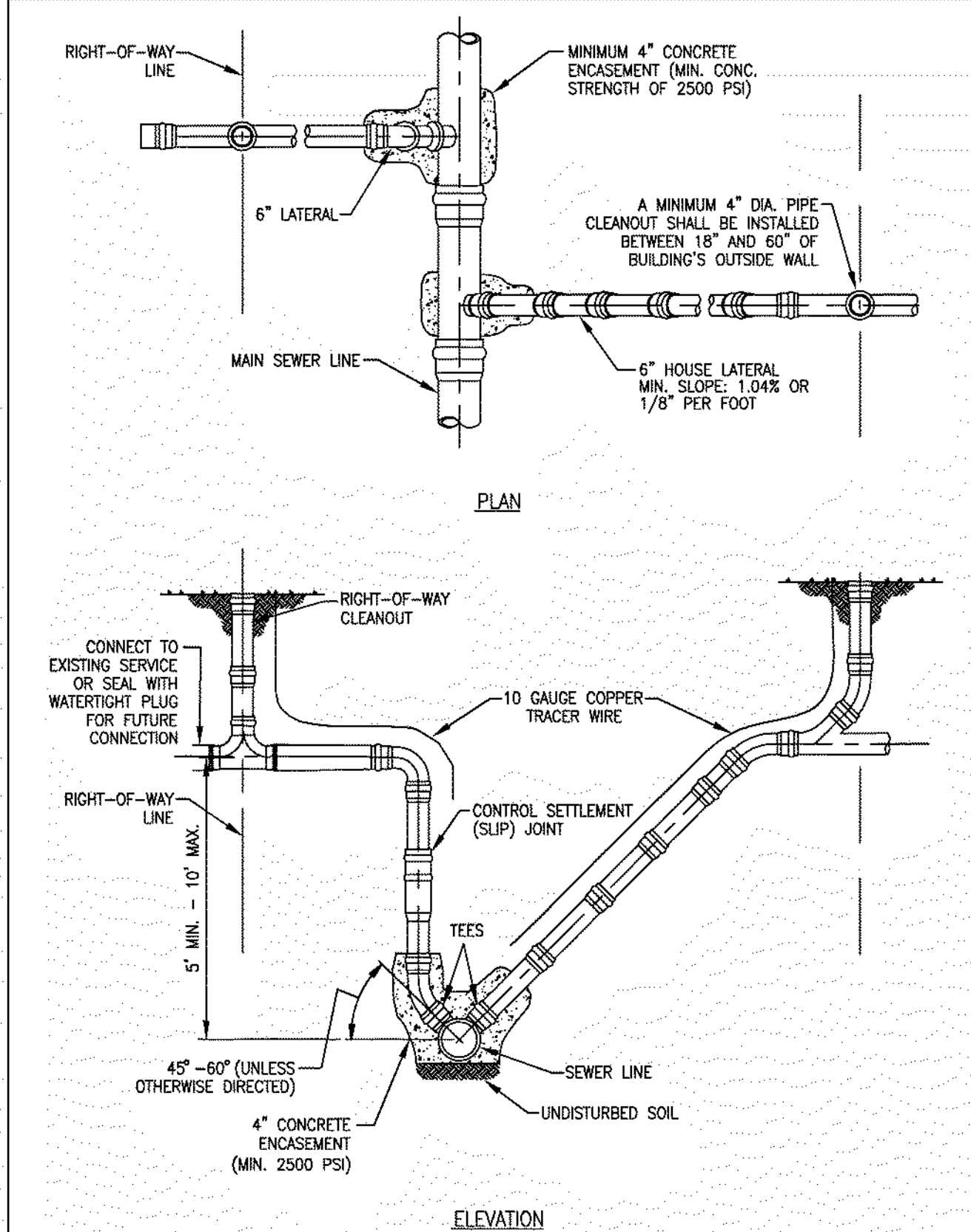
SCALE: 3/8" = 1'-0"

PAGE NUMBER:

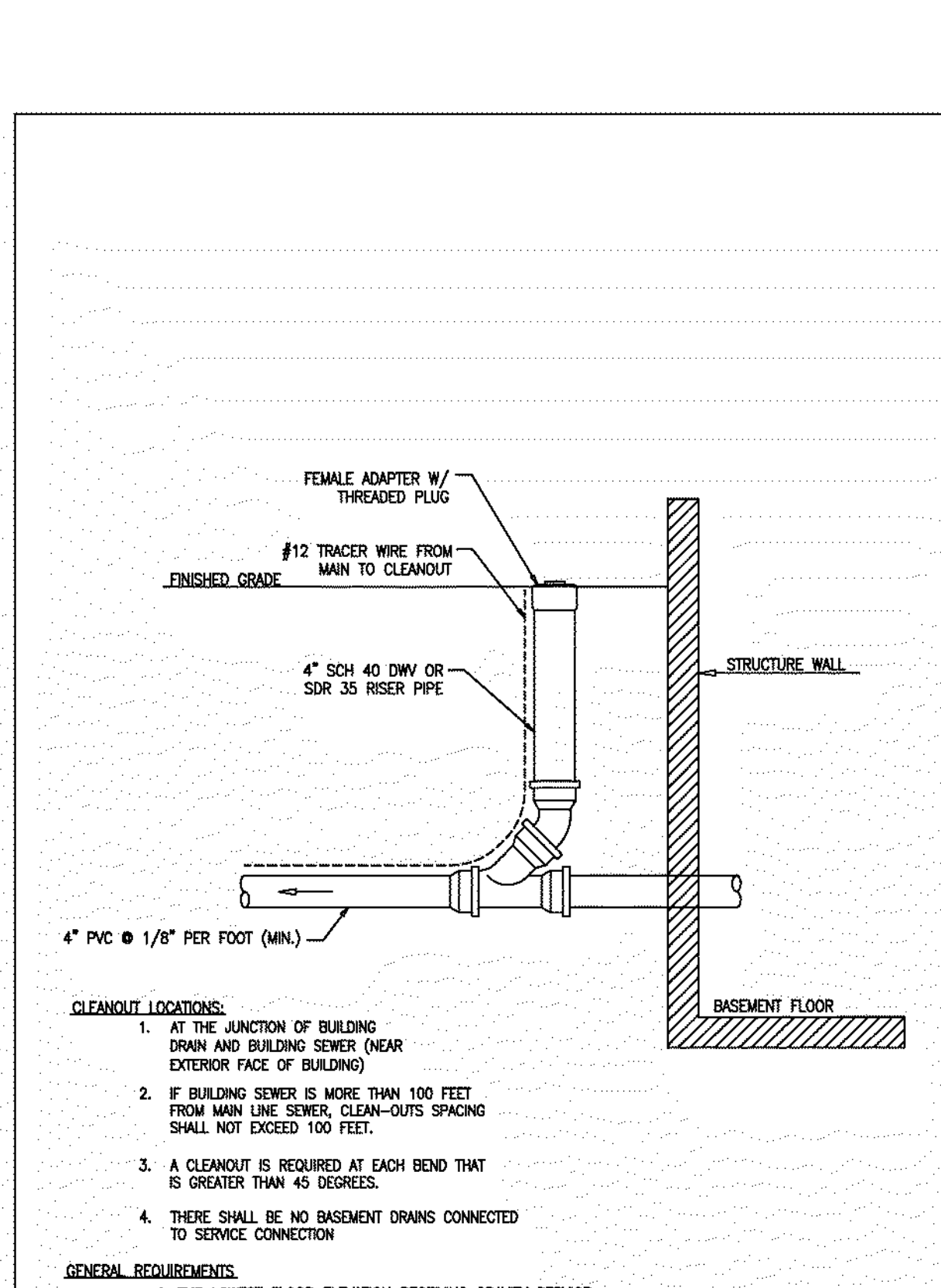




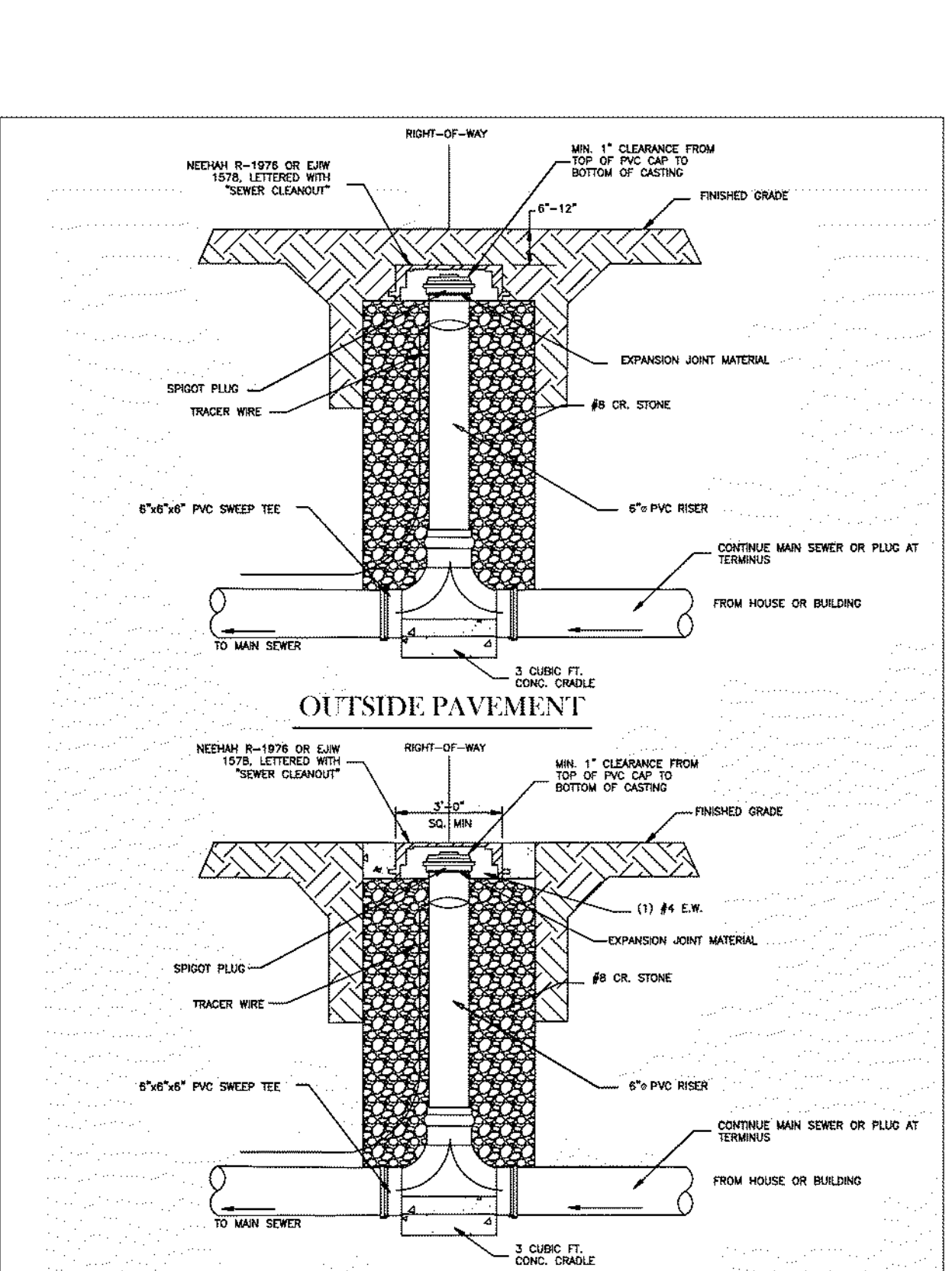
NOT TO SCALE
CITIZENS ENERGY GROUP
SERVICE CONNECTION FOR SHALLOW SEWERS (Less than 15' deep)
FIGURE 400.05



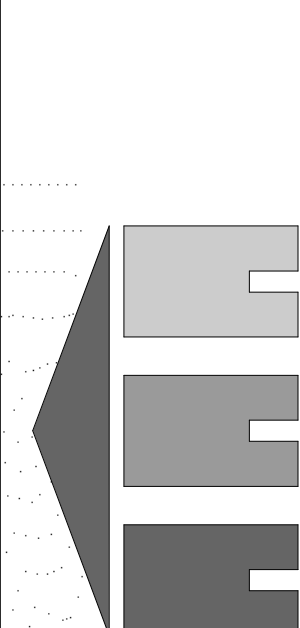
NOT TO SCALE
CITIZENS ENERGY GROUP
SERVICE CONNECTION FOR DEEP SEWERS (15' deep and over)
FIGURE 400.06



NOT TO SCALE
CITIZENS ENERGY GROUP
HOUSE/BUILDING SERVICE CLEAN-OUT DETAIL
FIGURE 400.09



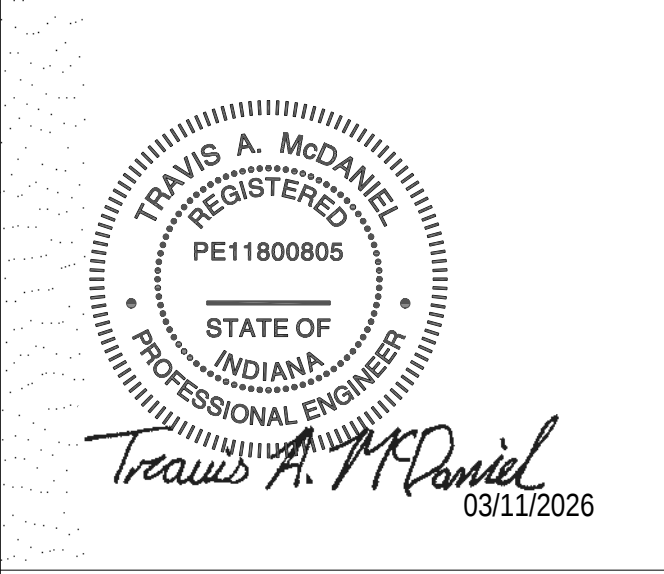
NOT TO SCALE
CITIZENS ENERGY GROUP
RIGHT-OF-WAY CLEAN-OUT DETAIL
FIGURE 400.10



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PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
UTILITY DETAILS
(CONT.)

REVISIONS:			
NO.	DATE	DESCRIPTION	BY

JOB NUMBER:
25.484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

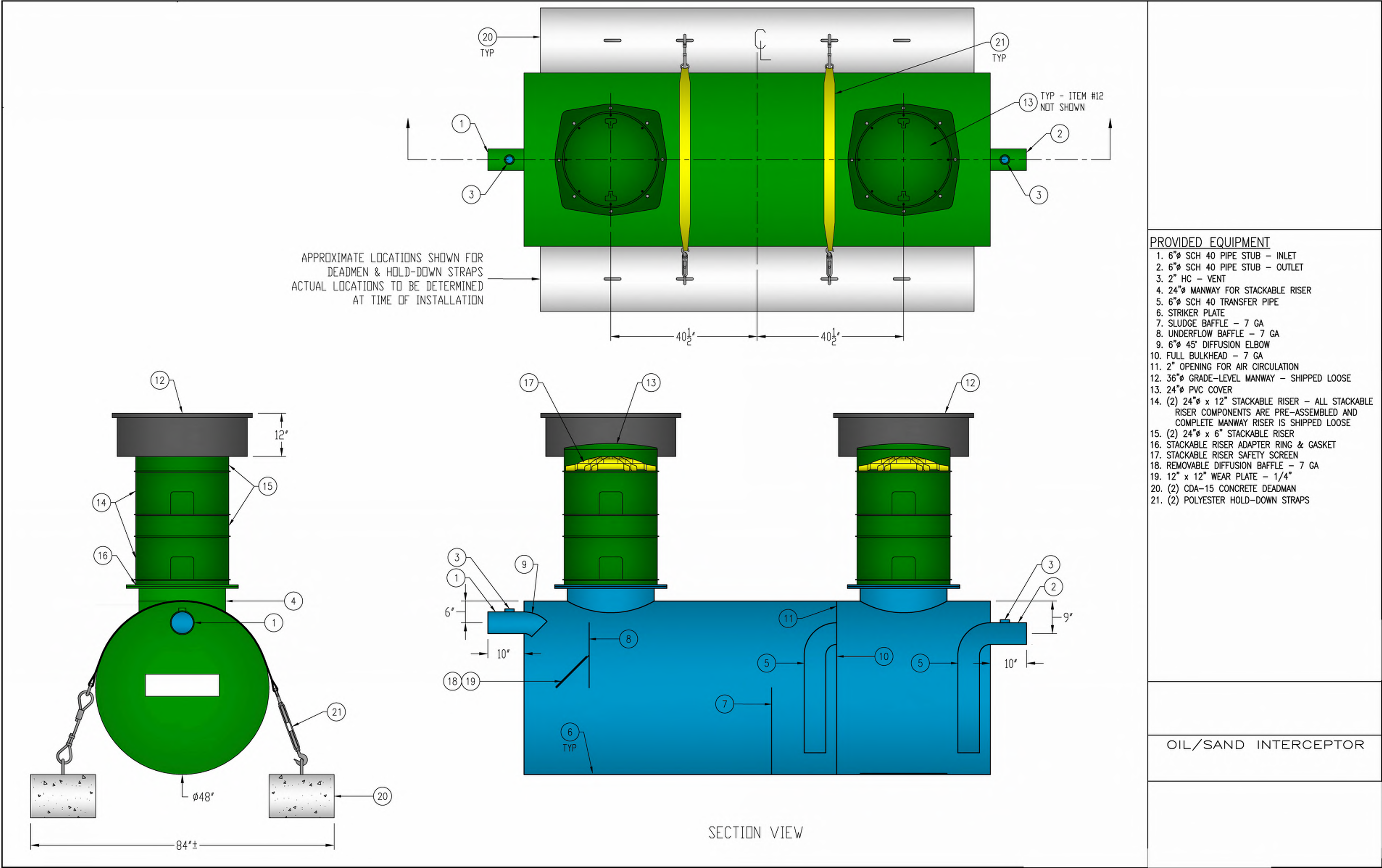
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PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE:

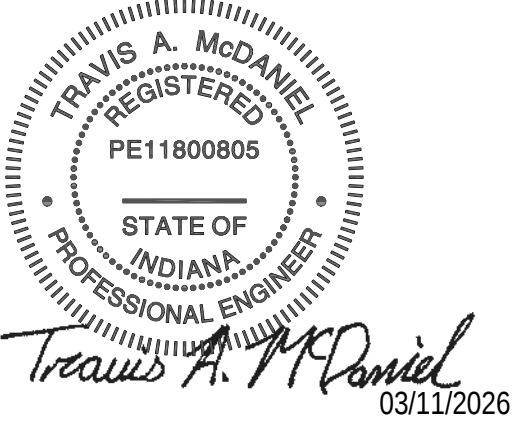
PAGE NUMBER:



1 OIL/SAND SEPARATOR DETAIL
1 1/2" = 1'-0"

- PROVIDED EQUIPMENT
1. 6" SCH 40 PIPE STUB - INLET
 2. 6" SCH 40 PIPE STUB - OUTLET
 3. 2" HC - VENT
 4. 24" MANWAY FOR STACKABLE RISER
 5. 6" SCH 40 TRANSFER PIPE
 6. STRIKER PLATE
 7. SLUDGE BAFFLE - 7 GA
 8. UNDERFLOW BAFFLE - 7 GA
 9. 6" 45° DIFFUSION ELBOW
 10. FULL BULKHEAD - 7 GA
 11. 2" OPENING FOR AIR CIRCULATION
 12. 36" GRADE-LEVEL MANWAY - SHIPPED LOOSE
 13. 24" PVC COVER
 14. (2) 24" x 12" STACKABLE RISER - ALL STACKABLE RISER COMPONENTS ARE PRE-ASSEMBLED AND COMPLETE MANWAY RISER IS SHIPPED LOOSE
 15. (2) 24" x 6" STACKABLE RISER
 16. STACKABLE RISER ADAPTER RING & GASKET
 17. STACKABLE RISER SAFETY SCREEN
 18. REMOVABLE DIFFUSION BAFFLE - 7 GA
 19. 12" x 12" WEAR PLATE - 1/4"
 20. (2) CDA-15 CONCRETE DEADMAN
 21. (2) POLYESTER HOLD-DOWN STRAPS

OIL/SAND INTERCEPTOR



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60" X 140" RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
DRAWING DETAIL

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	1/15/26	UPDATED OIL/SAND SEPARATOR DETAIL	HN

JOB NUMBER:
25.484.071

DRAWN
BY: TAM

ENGINEERED
BY: TAM

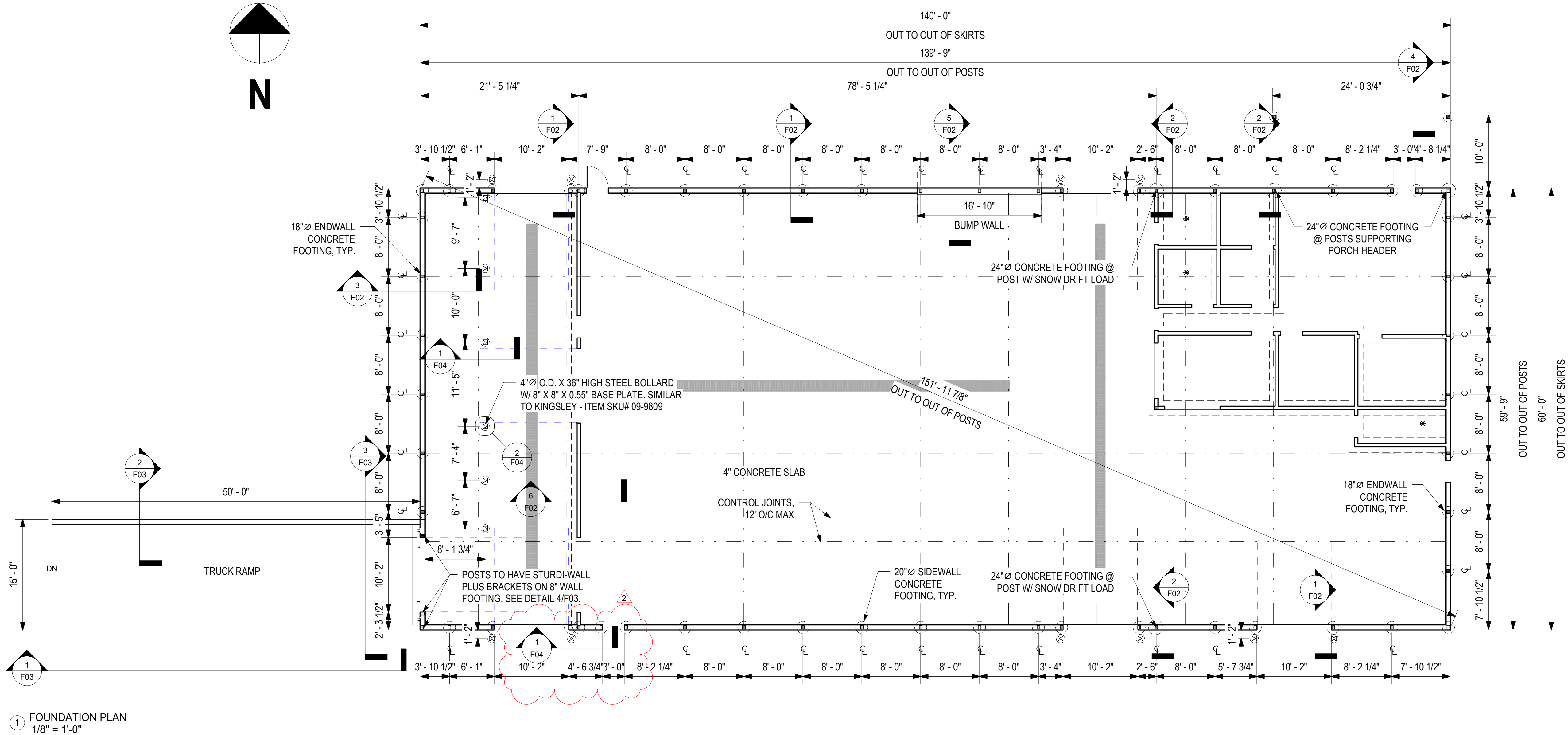
START DATE: 06/03/25

PROGRESS DATE:

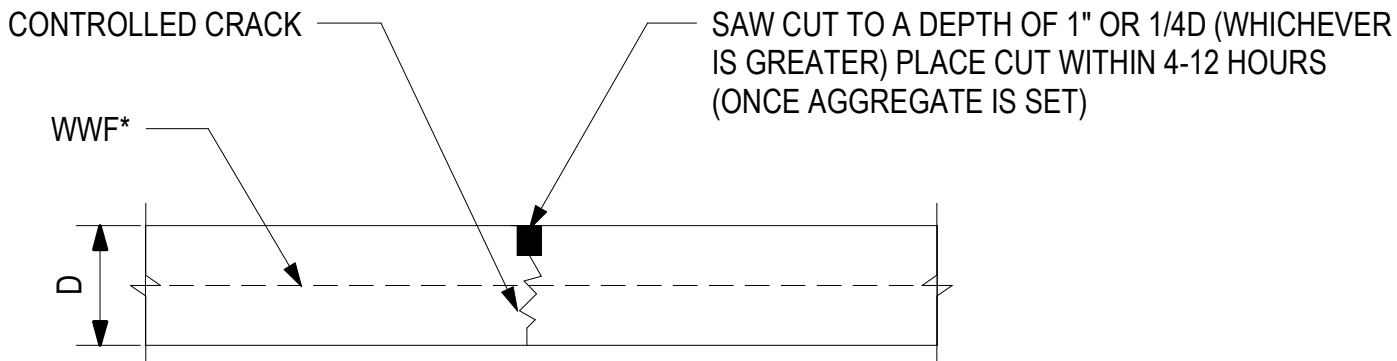
CERTIFIED DATE: 03/11/26

SCALE: 1 1/2" = 1'-0"

PAGE NUMBER:



*NOTE:
EVERY OTHER BAR SHALL EXTEND THROUGH CONTROL JOINTS. CUT ONE HALF OF HORIZONTAL STEEL AT THESE LOCATIONS



3 CONTROL JOINT DETAIL
1 1/2" = 1'-0"



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
FOUNDATION PLAN

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	1/15/26	UPDATED FLOOR DRAINS	HN
2	2/25/26	ADDED PIPE BOLLARDS & FOOTING DETAILS	HN

JOB NUMBER:
25,484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

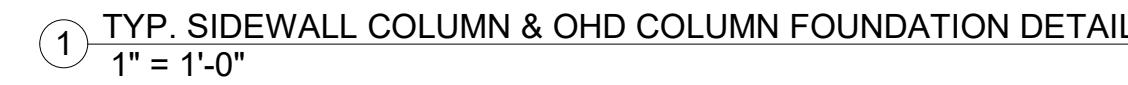
START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:



PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
FOUNDATION DETAILS

NO.	DATE	DESCRIPTION	BY
1	3/11/26	UPDATED FLOOR INSULATION (REMOVED "FIBER")	HN

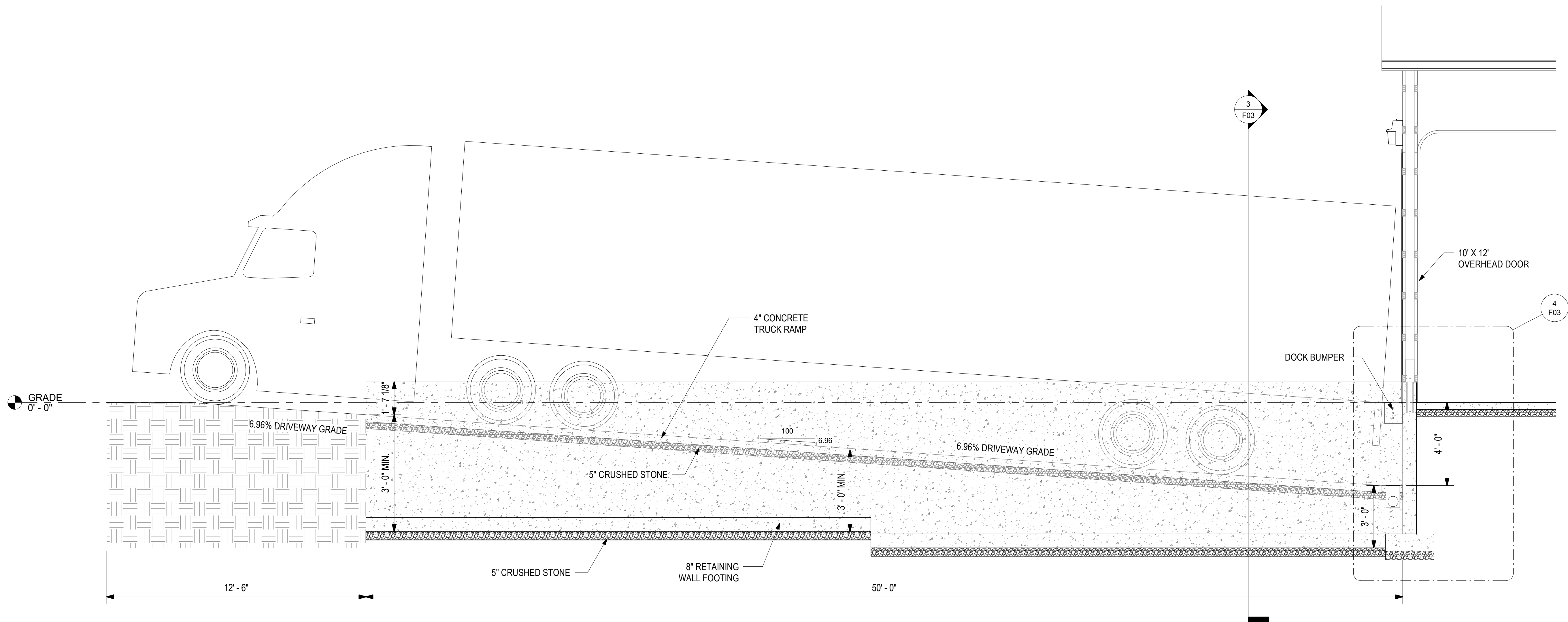
DRAWN
BY: TAM

START DATE:	06/03/25
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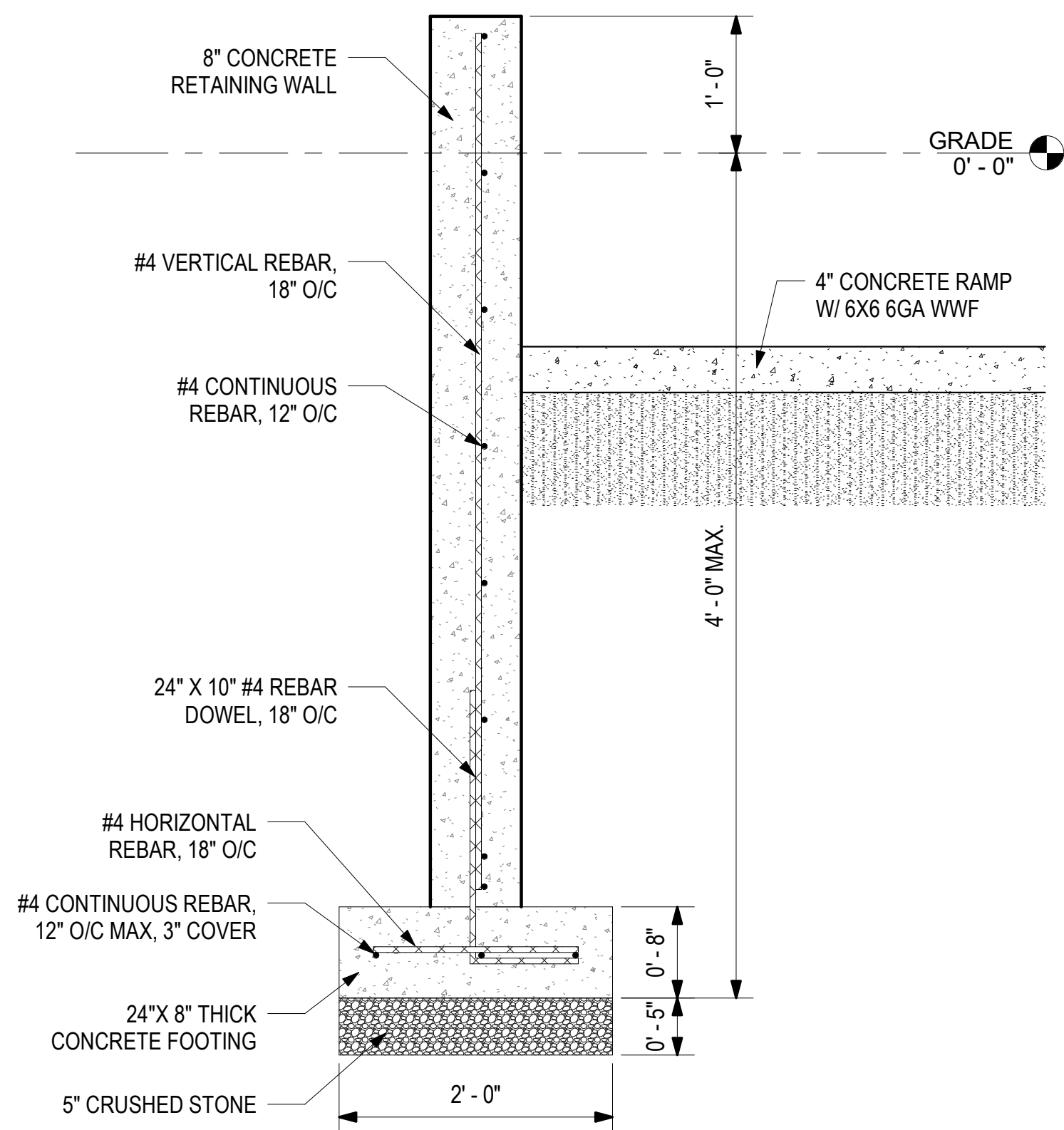
CERTIFIED DATE: 03/11/26

PAGE NUMBER:

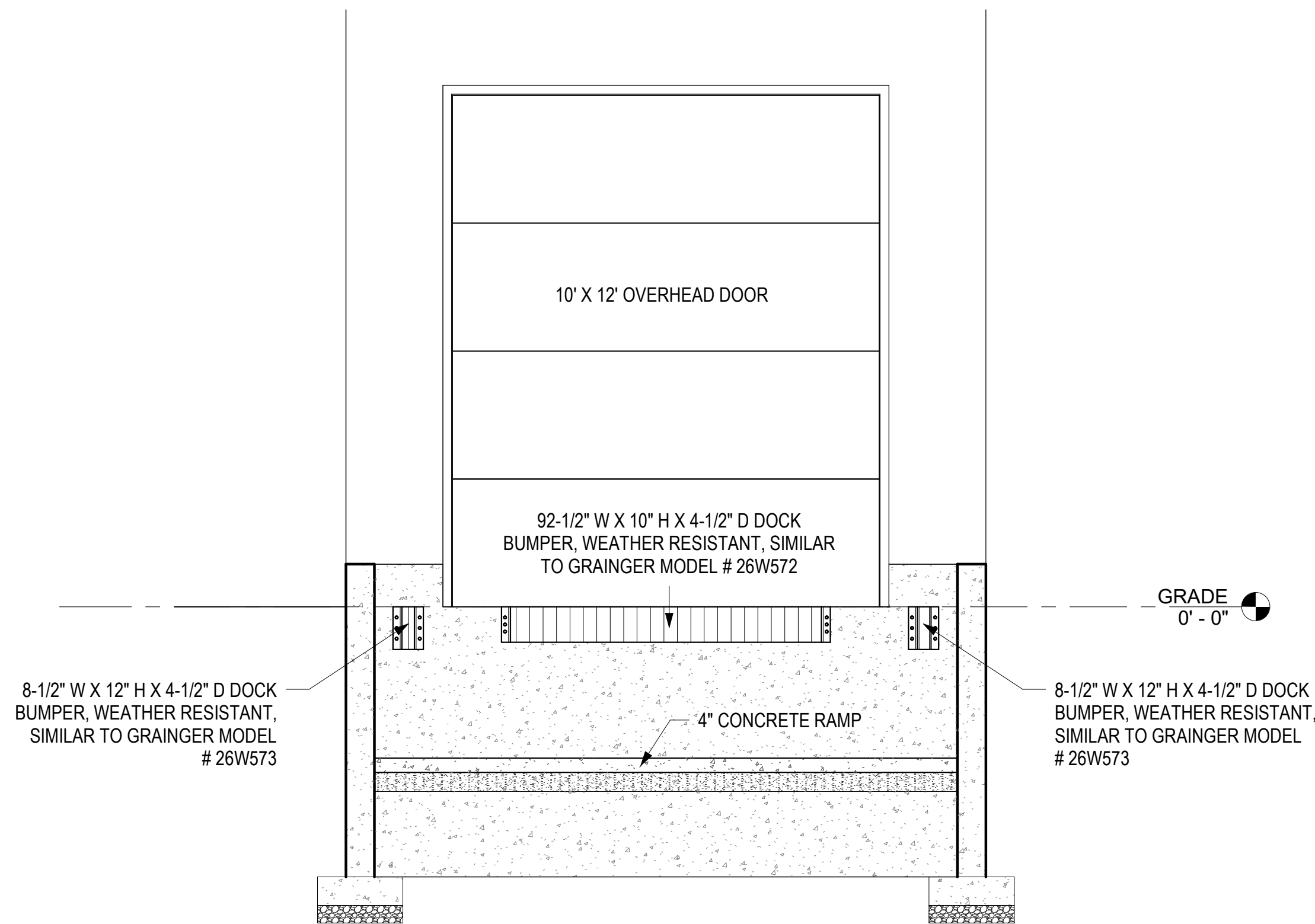
F02 OF F05 SHEET



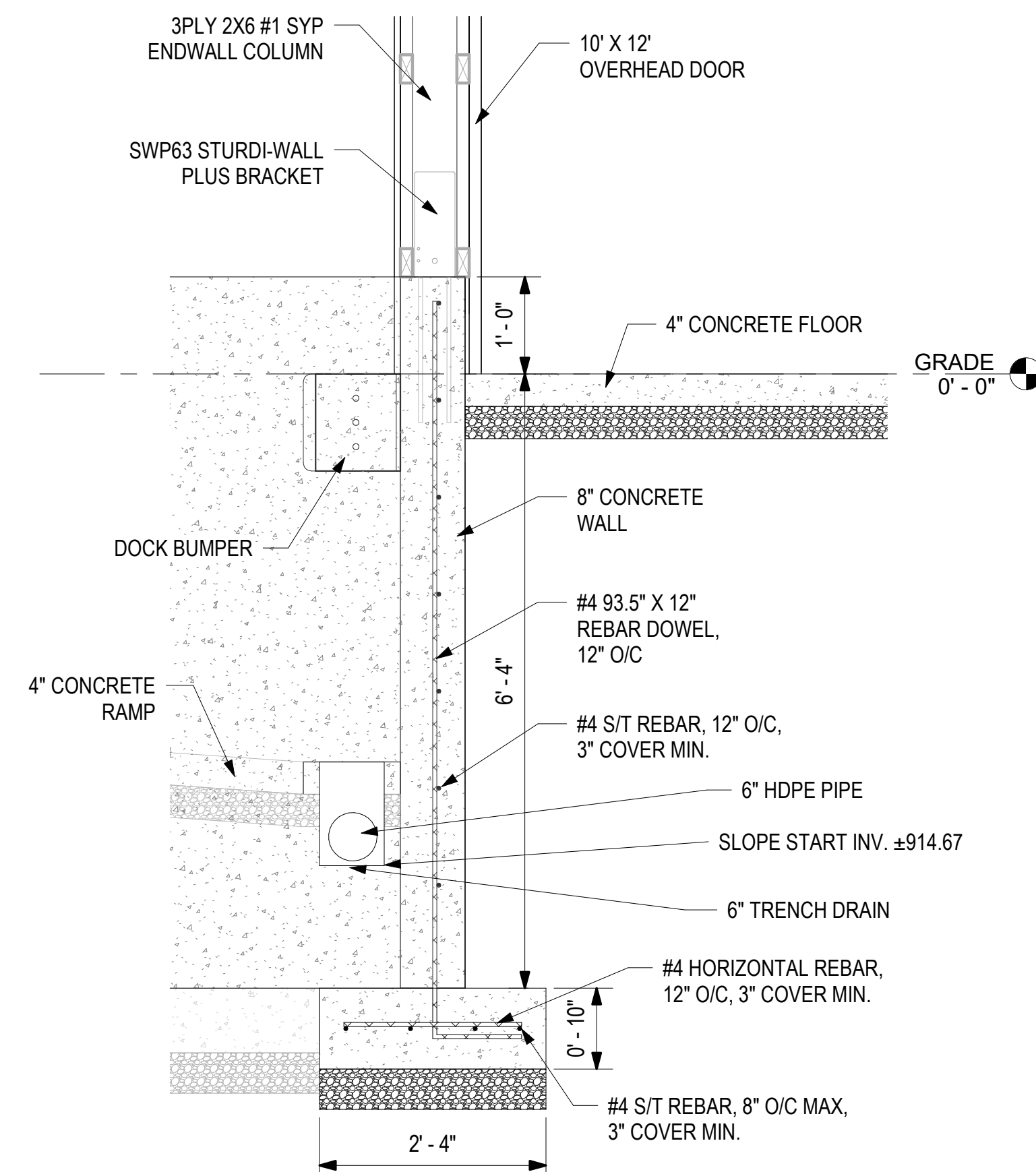
1 TRUCK RAMP SECTION VIEW
3/8" = 1'-0"



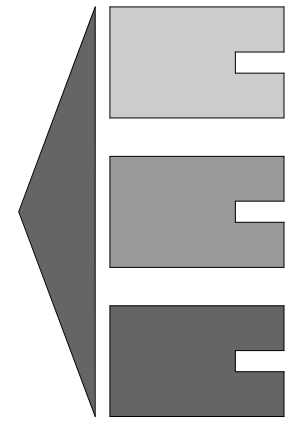
2 TRUCK RAMP RETAINING WALL FOUNDATION DETAIL
1" = 1'-0"



3 TRUCK RAMP FRONT VIEW
3/8" = 1'-0"



4 ENDWALL FOUNDATION DETAIL AT LOADING DOCK
3/4" = 1'-0"



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Travis A. McDaniel, PE



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
TRUCK RAMP
FOUNDATION DETAILS

REVISIONS:

NO.	DATE	DESCRIPTION	BY
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JOB NUMBER:
25,484.071

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START DATE: 06/03/25

PROGRESS DATE:

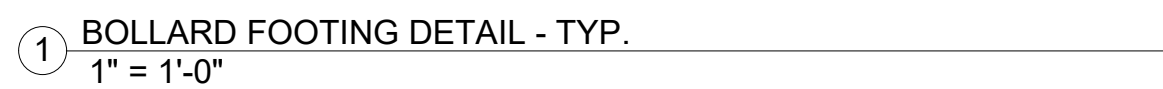
CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:

F03 OF F05 SHEETS

REV.



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
BOLLARD FOOTING
DETAILS

REVISIONS:

NO.	DATE	DESCRIPTION	BY
	2/25/26	ADDED PIPE BOLLARDS & FOOTING DETAILS	HN

JOB NUMBER:
25.484.071

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BY: TAM

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START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

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CONCRETE DESIGN NOTE:
(FULL CONCRETE NOTE CAN BE PROVIDED AS REQUESTED.)

- 1) SCOPE
ALL CONCRETE DESIGNS ARE THE INTERPRETATION OF MSS ENGINEERING, LLC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL DESIGNS MEET ALL APPLICABLE BUILDING CODES AND REGULATIONS. THE CONTRACTOR SHALL NOTIFY MSS ENGINEERING OF "SITE SPECIFIC" CODE REGULATIONS PRIOR TO ANY WORK BEING PERFORMED. ALL CONCRETE WORK SHALL CONFORM TO SPECIFICATIONS SET FORTH BY THE AMERICAN CONCRETE INSTITUTE (ACI).
- 2) CONCRETE MATERIALS & MIXTURE REQUIREMENTS
CONCRETE SHALL BE OF AIR ENTRAINED PORTLAND CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS AND 3" TO 4" SLUMP. (UNLESS NOTED OTHERWISE)
A. CEMENTITIOUS MATERIALS:
CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C-150, TYPE I. ALL CEMENTITIOUS MATERIAL AND THE COMBINATION OF THESE MATERIALS SHALL BE INCLUDED IN CALCULATING THE W/CM OF THE CONCRETE MIXTURE.
B. AGGREGATES
THE AGGREGATE SHALL BE CRUSHED LIMESTONE OR A MSS ENG. APPROVED EQUIVALENT AND BE FREE OF CHEMICALS, COATINGS, OR OTHER MATERIALS WHICH AFFECT THE BONDING OF THE CEMENT PASTE. NORMAL-WEIGHT AGGREGATE SHALL CONFORM TO ASTM C33 WITH A MAXIMUM SIZE OF 1 1/4". LIGHT-WEIGHT AGGREGATE SHALL CONFORM TO ASTM C330
C. WATER
WATER SHALL BE CLEAN, POTABLE, AND FREE FROM ACIDS, ALKALIS, OR ORGANIC MATERIAL. MIXING WATER SHALL CONFORM TO ASTM C1602.
D. ADMIXTURES
AIR-ENTRAINMENT: ASTM C260
WATER REDUCTION AND SETTING TIME MODIFICATION: ASTM C494
PRODUCING FLOWING CONCRETE: ASTM C1017
INHIBITING CHLORIDE-INDUCED CORROSION: ASTM C1582
E. STEEL REINFORCEMENT
STEEL REINFORCEMENT USED FOR SHEAR RESISTANCE SHALL BE DEFORMED, CONFORM TO ASTM A820, AND HAVE A LENGTH-TO-DIAMETER RATIO OF AT LEAST 50 AND NOT EXCEEDING 100.
F. CONCRETE MIXTURE REQUIREMENTS (UNLESS NOTED OTHERWISE)
- MINIMUM COMPRESSIVE STRENGTH (F'/c): 3000 PSI
- TEST AGE FOR COMPRESSIVE STRENGTH: 28 DAYS
- MAXIMUM WATER /CEMENT RATIO (W/CM): 0.45
- MAXIMUM SIZE OF COURSE AGGREGATE LESS THAN LEAST OF (I), (II), (III):
(I) ONE-FIFTH THE NARROWEST DIMENSION BETWEEN SIDES OF FORMS
(II) ONE-THIRD THE DEPTH OF SLABS
(III) THREE-FOURTHS THE MINIMUM SPECIFIED CLEAR SPACING BETWEEN INDIVIDUAL REINFORCING BARS OR WIRES, BUNDLES OF BARS, PRESTRESSED REINFORCEMENT, INDIVIDUAL TENDONS, BUNDLED TENDONS, OR DUCTS
- 3) CONCRETE PRODUCTION & CONSTRUCTION
A. CONCRETE PLACEMENT & CONSOLIDATION:
- DEBRIS AND ICE SHALL BE REMOVED FROM SPACES TO BE OCCUPIED BY CONCRETE BEFORE PLACEMENT.
- STANDING WATER SHALL BE REMOVED FROM PLACE OF DEPOSIT BEFORE CONCRETE IS PLACED.
- MASONRY FILLER UNITS THAT WILL BE IN CONTACT WITH CONCRETE SHALL BE PREWETTED PRIOR TO PLACING CONCRETE.
- EQUIPMENT USED TO CONVEY CONCRETE FROM THE MIXER TO THE LOCATION OF FINAL PLACEMENT SHALL HAVE CAPABILITIES TO ACHIEVE THE PLACEMENT REQUIREMENTS.
- CONCRETE SHALL NOT BE PUMPED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOYS.
- CONCRETE SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING:
· AT A RATE TO PROVIDE AN ADEQUATE SUPPLY OF CONCRETE AT THE LOCATION OF PLACEMENT.
· AT A RATE SO CONCRETE AT ALL TIMES HAS SUFFICIENT WORKABILITY SUCH THAT IT CAN BE CONSOLIDATED BY THE INTENDED METHODS.
· WITHOUT SEGREGATION OR LOSS OF MATERIALS.
· WITHOUT INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF WORKABILITY BETWEEN SUCCESSIVE PLACEMENTS THAT WOULD RESULT IN COLD JOINTS.
· DEPOSITED AS NEAR TO ITS FINAL LOCATION AS PRACTICABLE TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING.
- CONCRETE THAT HAS BEEN CONTAMINATED OR HAS LOST ITS INITIAL WORKABILITY TO THE EXTENT THAT IT CAN NO LONGER BE CONSOLIDATED BY THE INTENDED METHODS SHALL NOT BE USED.
- RETEMPERING CONCRETE IN ACCORDANCE WITH THE LIMITS OF ASTM C94 SHALL BE PERMITTED.
- AFTER STARTING, CONCRETING SHALL BE CARRIED ON AS A CONTINUOUS OPERATION UNTIL THE COMPLETION OF A PANEL OR SECTION, AS DEFINED BY ITS BOUNDARIES OR PREDETERMINED JOINTS.
- CONCRETE SHALL BE CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE WORKED AROUND REINFORCEMENT AND EMBEDMENTS AND INTO CORNERS OF FORMS.
- TOP SURFACES OF VERTICALLY FORMED LIFTS SHALL BE GENERALLY LEVEL.

- B. CURING CONCRETE:
- CONCRETE, OTHER THAN HIGH-EARLY-STRENGTH, SHALL BE MAINTAINED AT A TEMPERATURE OF AT LEAST 50°F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST 7 DAYS AFTER PLACEMENT, EXCEPT IF ACCELERATED CURING IS USED.
- HIGH-EARLY-STRENGTH CONCRETE SHALL BE MAINTAINED AT A TEMPERATURE OF AT LEAST 50°F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST 3 DAYS AFTER PLACEMENT, EXCEPT IF ACCELERATED CURING IS USED.
- ACCELERATED CURING TO ACCELERATE STRENGTH GAIN AND REDUCE TIME OF CURING IS PERMITTED USING HIGH-PRESSURE STEAM, STEAM AT ATMOSPHERIC PRESSURE, HEAT AND MOISTURE. IF ACCELERATED CURING IS USED, THE FOLLOWING SHALL APPLY:
· COMPRESSIVE STRENGTH AT THE LOAD STAGE CONSIDERED SHALL BE AT LEAST THE STRENGTH REQUIRED AT THAT LOAD STAGE.
· ACCELERATED CURING SHALL NOT IMPAIR THE DURABILITY OF THE CONCRETE.
· PROCEDURES FOR PROTECTING AND CURING CONCRETE SHALL BE CONSIDERED ADEQUATE IF (I) OR (II) ARE SATISFIED:
(I) AVERAGE STRENGTH OF FIELD-CURED CYLINDERS AT TEST AGE DESIGNATED FOR DETERMINATION OF F'/c IS EQUAL TO OR AT LEAST 85 PERCENT OF THAT OF COMPANION STANDARD-CURED CYLINDERS.
(II) AVERAGE STRENGTH OF FIELD-CURED CYLINDERS AT TEST AGE EXCEEDS F'/c BY MORE THAN 500 PSI.
C. CONCRETING IN COLD WEATHER:
- ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING FREEZING OR NEAR-FREEZING WEATHER.
- FROZEN MATERIALS OR MATERIALS CONTAINING ICE SHALL NOT BE USED.
- FORMS, FILLERS, AND GROUND WITH WHICH CONCRETE IS TO COME IN CONTACT SHALL BE FREE FROM FROST AND ICE.
- CONCRETE MATERIALS AND PRODUCTION METHODS SHALL BE SELECTED SO THAT THE CONCRETE TEMPERATURE AT DELIVERY COMPLIES WITH THE SPECIFIED TEMPERATURE LIMITS.
D. CONCRETING IN HOT WEATHER:
- CONCRETE MATERIALS AND PRODUCTION METHODS SHALL BE SELECTED SO THAT THE CONCRETE TEMPERATURE AT DELIVERY COMPLIES WITH THE SPECIFIED TEMPERATURE LIMITS.
- HANDLING, PLACING, PROTECTION, AND CURING PROCEDURES SHALL LIMIT CONCRETE TEMPERATURES OR WATER EVAPORATION THAT COULD REDUCE STRENGTH, SERVICEABILITY, AND DURABILITY OF THE MEMBER OR STRUCTURE.
E. CONSTRUCTION, CONTRACTION, & ISOLATION JOINTS:
- JOINT LOCATIONS OR JOINT DETAILS NOT SHOWN OR THAT DIFFER FROM THOSE INDICATED IN CONSTRUCTION DOCUMENTS SHALL BE SUBMITTED FOR REVIEW BY THE LICENSED DESIGN PROFESSIONAL.
- EXCEPT FOR PRESTRESSED CONCRETE, CONSTRUCTION JOINTS IN FLOOR AND ROOF SYSTEMS SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF SPANS OF SLABS, BEAMS, AND GIRDERS.
- CONSTRUCTION JOINTS IN GIRDERS SHALL BE OFFSET A DISTANCE OF AT LEAST TWO TIMES THE WIDTH OF INTERSECTING BEAMS, MEASURED FROM THE FACE OF THE INTERSECTING BEAM.
- CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED BEFORE NEW CONCRETE IS PLACED.
- SURFACE OF CONCRETE CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED.
- IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE PREWETTED AND STANDING WATER REMOVED.
- 4) REINFORCEMENT MATERIALS & CONSTRUCTION REQUIREMENTS
ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615 GRADE 60, UNLESS INDICATED OTHERWISE ON THE DRAWING. ALL REINFORCING STEEL SHALL BE DEFORMED REINFORCEMENT. WELDED WIRE FABRIC SHALL BE ELECTRICALLY WELDED COLD-DRAWN WIRE OF GAUGE AND MESH SIZE SHOWN ON THE DRAWING, AND SHALL CONFORM TO ASTM A185, DEFORMED TYPE.
A. GENERAL:
- MILL TEST REPORTS FOR REINFORCEMENT SHALL BE SUBMITTED.
- NONPRESTRESSED REINFORCEMENT WITH RUST, MILL SCALE, OR A COMBINATION OF BOTH SHALL BE CONSIDERED SATISFACTORY, PROVIDED A HAND-WIRE-BRUSHED REPRESENTATIVE TEST SPECIMEN OF THE REINFORCEMENT COMPLIES WITH THE APPLICABLE ASTM SPECIFICATION FOR THE MINIMUM DIMENSIONS (INCLUDING HEIGHT OF DEFORMATIONS) AND WEIGHT PER UNIT LENGTH.
- PRESTRESSING REINFORCEMENT SHALL BE FREE OF MILL SCALE, PITTING, AND EXCESSIVE RUST. A LIGHT COATING OF RUST SHALL BE PERMITTED.
- AT THE TIME CONCRETE IS PLACED, REINFORCEMENT TO BE BONDED SHALL BE CLEAN OF ICE, MUD, OIL, OR OTHER DELETERIOUS COATINGS THAT DECREASE BOND.
- 5) ANCHORING TO CONCRETE
POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. POST-INSTALLED ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII)
- 6) FORMWORK
A. DESIGN OF FORMWORK:
- DESIGN OF FORMWORK SHALL CONSIDER (I) THROUGH (V):
(I) METHOD OF CONCRETE PLACEMENT.
(II) RATE OF CONCRETE PLACEMENT.
(III) CONSTRUCTION LOADS, INCLUDING VERTICAL, HORIZONTAL, AND IMPACT.
(IV) AVOIDANCE OF DAMAGE TO PREVIOUSLY CONSTRUCTED MEMBERS.
(V) FOR POST-TENSIONED MEMBERS, ALLOWANCE FOR MOVEMENT OF THE MEMBER DURING APPLICATION OF THE PRESTRESSING FORCE WITHOUT DAMAGE TO THE MEMBER.
- FORMWORK FABRICATION AND INSTALLATION SHALL RESULT IN A FINAL STRUCTURE THAT CONFORMS TO SHAPES, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS.
- FORMWORK SHALL BE SUFFICIENTLY TIGHT TO INHIBIT LEAKAGE OF PASTE OR MORTAR.
- FORMWORK SHALL BE BRACED OR TIED TOGETHER TO MAINTAIN POSITION AND SHAPE.

- B. REMOVAL OF FORMWORK:
- BEFORE STARTING CONSTRUCTION, THE CONTRACTOR SHALL DEVELOP A PROCEDURE AND SCHEDULE FOR REMOVAL OF FORMWORK AND INSTALLATION OF RESHORES, AND SHALL CALCULATE THE LOADS TRANSFERRED TO THE STRUCTURE DURING THIS PROCESS.
- STRUCTURAL ANALYSIS AND CONCRETE STRENGTH REQUIREMENTS USED IN PLANNING AND IMPLEMENTING THE FORMWORK REMOVAL AND RESHORE INSTALLATION SHALL BE FURNISHED BY THE CONTRACTOR TO THE LICENSED DESIGN PROFESSIONAL AND TO THE BUILDING OFFICIAL, WHEN REQUESTED.
- NO CONSTRUCTION LOADS SHALL BE PLACED ON, NOR ANY FORMWORK REMOVED FROM, ANY PART OF THE STRUCTURE UNDER CONSTRUCTION EXCEPT WHEN THAT PORTION OF THE STRUCTURE IN COMBINATION WITH REMAINING FORMWORK HAS SUFFICIENT STRENGTH TO SUPPORT SAFELY ITS WEIGHT AND LOADS PLACED THEREON AND WITHOUT IMPAIRING SERVICEABILITY.
- SUFFICIENT STRENGTH SHALL BE DEMONSTRATED BY STRUCTURAL ANALYSIS CONSIDERING ANTICIPATED LOADS, STRENGTH OF FORMWORK, AND AN ESTIMATE OF IN-PLACE CONCRETE STRENGTH.
- THE ESTIMATE OF IN-PLACE CONCRETE STRENGTH SHALL BE BASED ON TESTS OF FIELD-CURED CYLINDERS OR ON OTHER PROCEDURES TO EVALUATE CONCRETE STRENGTH APPROVED BY THE LICENSED DESIGN PROFESSIONAL AND, WHEN REQUESTED, APPROVED BY THE BUILDING OFFICIAL.
- FORMWORK SHALL BE REMOVED IN SUCH A MANNER NOT TO IMPAIR SAFETY AND SERVICEABILITY OF THE STRUCTURE.
- CONCRETE EXPOSED BY FORMWORK REMOVAL SHALL HAVE SUFFICIENT STRENGTH NOT TO BE DAMAGED BY THE REMOVAL.
- FORMWORK SUPPORTS FOR POST-TENSIONED MEMBERS SHALL NOT BE REMOVED UNTIL SUFFICIENT POST-TENSIONING HAS BEEN APPLIED TO ENABLE POST-TENSIONED MEMBERS TO SUPPORT THEIR DEAD LOAD AND ANTICIPATED CONSTRUCTION LOADS.
- NO CONSTRUCTION LOADS EXCEEDING THE COMBINATION OF SUPERIMPOSED DEAD LOAD PLUS LIVE LOAD INCLUDING REDUCTION SHALL BE PLACED ON ANY UNSHORED PORTION OF THE STRUCTURE UNDER CONSTRUCTION, UNLESS ANALYSIS INDICATES ADEQUATE STRENGTH TO SUPPORT SUCH ADDITIONAL LOADS AND WITHOUT IMPAIRING SERVICEABILITY.
- 7) CONCRETE EVALUATION & ACCEPTANCE
A. GENERAL:
- A STRENGTH TEST SHALL BE THE AVERAGE OF THE STRENGTHS OF AT LEAST TWO 6 X 12 IN. CYLINDERS OR AT LEAST THREE 4 X 8 IN. CYLINDERS MADE FROM THE SAME SAMPLE OF CONCRETE AND TESTED AT 28 DAYS OR AT TEST AGE DESIGNATED FOR FC'.
- THE TESTING AGENCY PERFORMING ACCEPTANCE TESTING SHALL COMPLY WITH ASTM C1077.
- QUALIFIED FIELD TESTING TECHNICIANS SHALL PERFORM TESTS ON FRESH CONCRETE AT THE JOB SITE, PREPARE SPECIMENS FOR STANDARD CURING, PREPARE SPECIMENS FOR FIELD CURING, IF REQUIRED, AND RECORD THE TEMPERATURE OF THE FRESH CONCRETE WHEN PREPARING SPECIMENS FOR STRENGTH TESTS.
- QUALIFIED LABORATORY TECHNICIANS SHALL PERFORM REQUIRED LABORATORY TESTS.
- ALL REPORTS OF ACCEPTANCE TESTS SHALL BE PROVIDED TO THE LICENSED DESIGN PROFESSIONAL, CONTRACTOR, CONCRETE PRODUCER, AND, IF REQUESTED, TO THE OWNER AND THE CODE OFFICIAL.
- B. FREQUENCY OF TESTING:
- SAMPLES FOR PREPARING STRENGTH TEST SPECIMENS OF EACH CONCRETE MIXTURE PLACED EACH DAY SHALL BE TAKEN IN ACCORDANCE WITH (I) THROUGH (III):
(I) AT LEAST ONCE A DAY.
(II) AT LEAST ONCE FOR EACH 150 YD3 OF CONCRETE.
(III) AT LEAST ONCE FOR EACH 5000 FT2 OF SURFACE AREA FOR SLABS OR WALLS.
- ON A GIVEN PROJECT, IF TOTAL VOLUME OF CONCRETE IS SUCH THAT FREQUENCY OF TESTING WOULD PROVIDE FEWER THAN FIVE STRENGTH TESTS FOR A GIVEN CONCRETE MIXTURE, STRENGTH TEST SPECIMENS SHALL BE MADE FROM AT LEAST FIVE RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN FIVE BATCHES ARE USED.
- IF THE TOTAL QUANTITY OF A GIVEN CONCRETE MIXTURE IS LESS THAN 50 YD3, STRENGTH TESTS ARE NOT REQUIRED IF EVIDENCE OF SATISFACTORY STRENGTH IS SUBMITTED TO AND APPROVED BY THE CODE OFFICIAL.
- C. ACCEPTANCE CRITERIA FOR STANDARD-CURED SPECIMENS:
- SPECIMENS FOR ACCEPTANCE TESTS SHALL BE IN ACCORDANCE WITH (I) AND (II):
(I) SAMPLING OF CONCRETE FOR STRENGTH TEST SPECIMENS SHALL BE IN ACCORDANCE WITH ASTM C172.
(II) CYLINDERS FOR STRENGTH TESTS SHALL BE MADE AND STANDARD-CURED IN ACCORDANCE WITH ASTM C31 AND TESTED IN ACCORDANCE WITH ASTM C39.
- STRENGTH LEVEL OF A CONCRETE MIXTURE SHALL BE ACCEPTABLE IF (I) AND (II) ARE SATISFIED:
(I) EVERY ARITHMETIC AVERAGE OF ANY THREE CONSECUTIVE STRENGTH TESTS EQUALS OR EXCEEDS F'c'.
(II) NO STRENGTH TEST FALLS BELOW F/c' BY MORE THAN 500 PSI IF F/c' IS 5000 PSI OR LESS; OR BY MORE THAN 0.10F/c' IF F/c' EXCEEDS 5000 PSI.
- IF EITHER OF THE REQUIREMENTS ARE NOT SATISFIED, STEPS SHALL BE TAKEN TO INCREASE THE AVERAGE OF SUBSEQUENT STRENGTH RESULTS
- REQUIREMENTS FOR INVESTIGATING LOW STRENGTH-TEST RESULTS SHALL APPLY IF THE REQUIREMENTS OF (II) ARE NOT MET

- 8) INSPECTION
A. GENERAL:
- CONCRETE CONSTRUCTION SHALL BE INSPECTED AS REQUIRED BY THE GENERAL BUILDING CODE.
- IN THE ABSENCE OF GENERAL BUILDING CODE INSPECTION REQUIREMENTS, CONCRETE CONSTRUCTION SHALL BE INSPECTED THROUGHOUT THE VARIOUS WORK STAGES BY OR UNDER THE SUPERVISION OF A LICENSED DESIGN PROFESSIONAL OR BY A QUALIFIED INSPECTOR IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION.
- THE LICENSED DESIGN PROFESSIONAL, A PERSON UNDER THE SUPERVISION OF A LICENSED DESIGN PROFESSIONAL, OR A QUALIFIED INSPECTOR SHALL VERIFY COMPLIANCE WITH CONSTRUCTION DOCUMENTS.
- FOR CONTINUOUS CONSTRUCTION INSPECTION OF SPECIAL MOMENT FRAMES, QUALIFIED INSPECTORS UNDER THE SUPERVISION OF THE LICENSED DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN OR UNDER THE SUPERVISION OF A LICENSED DESIGN PROFESSIONAL WITH DEMONSTRATED CAPABILITY TO SUPERVISE INSPECTION OF THESE ELEMENTS SHALL INSPECT PLACEMENT OF REINFORCEMENT AND CONCRETE.
B. INSPECTION REPORTS:
- INSPECTION REPORTS SHALL DOCUMENT INSPECTED ITEMS AND BE DEVELOPED THROUGHOUT EACH CONSTRUCTION WORK STAGE BY THE LICENSED DESIGN PROFESSIONAL, PERSON UNDER THE SUPERVISION OF A LICENSED DESIGN PROFESSIONAL, OR QUALIFIED INSPECTOR. RECORDS OF THE INSPECTION SHALL BE PRESERVED BY THE PARTY PERFORMING THE INSPECTION FOR AT LEAST 2 YEARS AFTER COMPLETION OF THE PROJECT.
- INSPECTION REPORTS SHALL DOCUMENT (I) THROUGH (IV):
(I) GENERAL PROGRESS OF THE WORK.
(II) ANY SIGNIFICANT CONSTRUCTION LOADINGS ON COMPLETED FLOORS, MEMBERS, OR WALLS.
(III) THE DATE AND TIME OF MIXING, QUANTITY, PROPORTIONS OF MATERIALS USED, APPROXIMATE PLACEMENT LOCATION IN THE STRUCTURE, AND RESULTS OF TESTS FOR FRESH AND HARDENED CONCRETE PROPERTIES FOR ALL CONCRETE MIXTURES USED IN THE WORK.
(IV) CONCRETE TEMPERATURES AND PROTECTION GIVEN TO CONCRETE DURING PLACEMENT AND CURING WHEN THE AMBIENT TEMPERATURE FALLS BELOW 40°F OR RISES ABOVE 95°F.
- TEST REPORTS SHALL BE REVIEWED TO VERIFY COMPLIANCE IF ASTM A615 DEFORMED REINFORCEMENT IS USED TO RESIST EARTHQUAKE-INDUCED FLEXURE, AXIAL FORCES, OR BOTH IN SPECIAL MOMENT FRAMES, SPECIAL STRUCTURAL WALLS, AND COMPONENTS OF SPECIAL STRUCTURAL WALLS INCLUDING COUPLING BEAMS AND WALL PIERS.
C. ITEMS REQUIRING INSPECTION:
UNLESS OTHERWISE SPECIFIED, ITEMS REQUIRING VERIFICATION AND INSPECTION SHALL BE CONTINUOUSLY OR PERIODICALLY INSPECTED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
- ITEMS REQUIRING CONTINUOUS INSPECTION SHALL INCLUDE (I) THROUGH (IV):
(I) PLACEMENT OF CONCRETE.
(II) TENSIONING OF PRESTRESSING STEEL AND GROUTING OF BONDED TENDONS.
(III) INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS IN ACCORDANCE WITH 17.8.2.4 AND WHERE REQUIRED AS A CONDITION OF THE ANCHOR ASSESSMENT IN ACCORDANCE WITH ACI 355.4.
(IV) REINFORCEMENT FOR SPECIAL MOMENT FRAMES.
- ITEMS REQUIRING PERIODIC INSPECTION SHALL INCLUDE (I) THROUGH (VII):
(I) PLACEMENT OF REINFORCEMENT, EMBEDMENTS, AND POST-TENSIONING TENDONS.
(II) CURING METHOD AND DURATION OF CURING FOR EACH MEMBER.
(III) CONSTRUCTION AND REMOVAL OF FORMS AND RESHORING.
(IV) SEQUENCE OF ERECTION AND CONNECTION OF PRECAST MEMBERS.
(V) VERIFICATION OF IN-PLACE CONCRETE STRENGTH BEFORE STRESSING POST-TENSIONED REINFORCEMENT AND BEFORE REMOVAL OF SHORES AND FORMWORK FROM BEAMS AND STRUCTURAL SLABS.
(VI) INSTALLATION OF CAST-IN ANCHORS, EXPANSION ANCHORS, AND UNDERCUT ANCHORS IN ACCORDANCE WITH ACI 17.8.2.
(VII) INSTALLATION OF ADHESIVE ANCHORS WHERE CONTINUOUS INSPECTION IS NOT REQUIRED IN ACCORDANCE WITH ACI 17.8.2.4 OR AS A CONDITION OF THE ASSESSMENT IN ACCORDANCE WITH ACI 355.4.

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TRAVIS A. MCDANIEL
REGISTERED
PE11800805
STATE OF INDIANA
PROFESSIONAL ENGINEER

Travis A. McDaniel
03/11/2026

PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
CONCRETE NOTES

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	3/11/26	UPDATED STEEL REINFORCEMENT ON CONCRETE NOTES	HN

JOB NUMBER:
25,484.071

DRAWN BY:
TAM

ENGINEERED BY:
TAM

START DATE:
06/03/25

PROGRESS DATE:

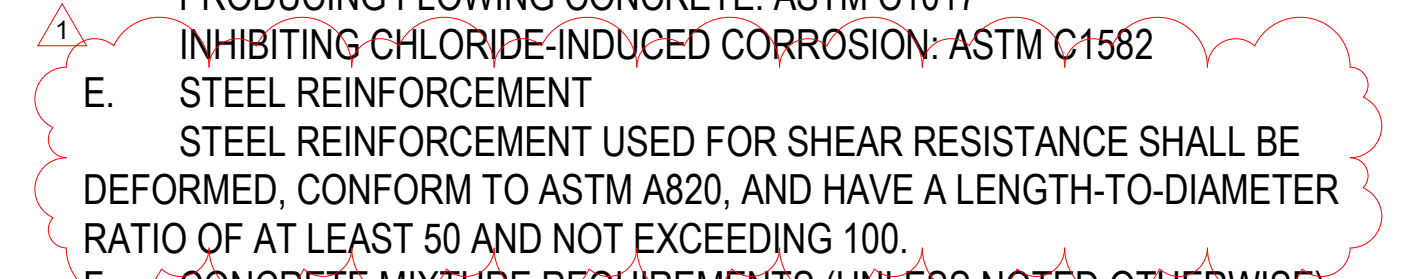
CERTIFIED DATE:
03/11/26

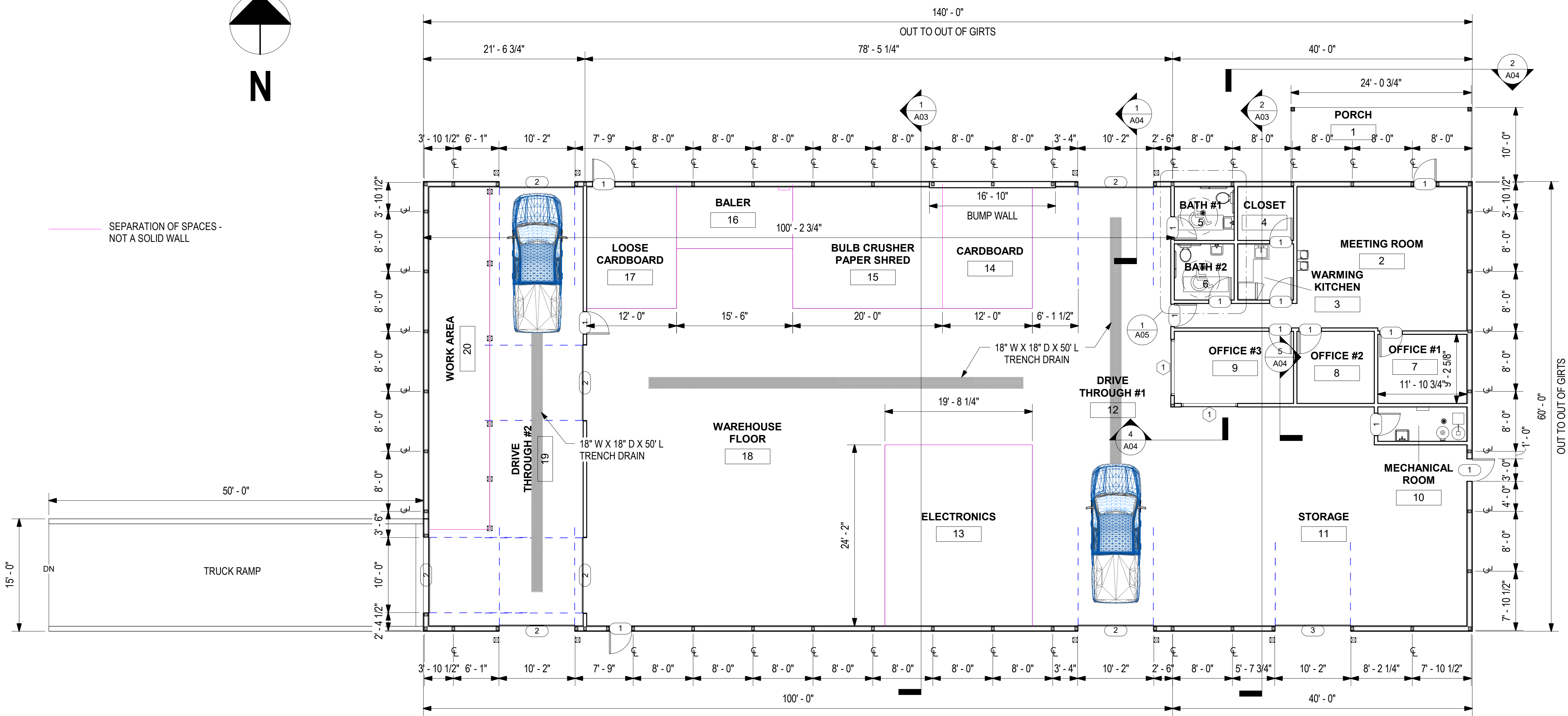
SCALE:

PAGE NUMBER:

F05 OF F05 SHEETS

REV. 1





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

FINISH SCHEDULE					
NUMBER	NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH
1	PORCH	CONCRETE - UNFINISHED	-	-	-
2	MEETING ROOM	VINYL PLANK FLOORING	4" PVC VINYL WALL BASE MOLDING	5/8" DRYWALL	5/8" DRYWALL
3	WARMING KITCHEN	CONCRETE - UNFINISHED	-	5/8" DRYWALL	5/8" DRYWALL
4	CLOSET	CONCRETE - UNFINISHED	-	5/8" DRYWALL	5/8" DRYWALL
5	BATH #1	CONCRETE - UNFINISHED	-	5/8" DRYWALL	5/8" DRYWALL
6	BATH #2	CONCRETE - UNFINISHED	-	5/8" DRYWALL	5/8" DRYWALL
7	OFFICE #1	VINYL PLANK FLOORING	4" PVC VINYL WALL BASE MOLDING	5/8" DRYWALL	5/8" DRYWALL
8	OFFICE #2	VINYL PLANK FLOORING	4" PVC VINYL WALL BASE MOLDING	5/8" DRYWALL	5/8" DRYWALL
9	OFFICE #3	VINYL PLANK FLOORING	4" PVC VINYL WALL BASE MOLDING	5/8" DRYWALL	5/8" DRYWALL
10	MECHANICAL ROOM	CONCRETE - UNFINISHED	-	5/8" DRYWALL	STEEL LINER
11	STORAGE	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
12	DRIVE THROUGH #1	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
13	ELECTRONICS	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
14	CARDBOARD	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
15	BULB CRUSHER PAPER SHRED	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
16	BALER	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
17	LOOSE CARDBOARD	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
18	WAREHOUSE FLOOR	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
19	DRIVE THROUGH #2	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER
20	WORK AREA	CONCRETE - UNFINISHED	-	STEEL LINER PANEL	STEEL LINER

DOOR SCHEDULE		
MARK	TYPE	COUNT
1	36" x 80" - MAN DOOR	14
2	10' x 12' - OVERHEAD DOOR	7
3	10' x 10' - OVERHEAD DOOR	1

WINDOW SCHEDULE		
MARK	TYPE	COUNT
1	84" x 48" - PICTURE WINDOW	2

ROOM SCHEDULE				
NUMBER	NAME	AREA	LOAD FACTOR	OCCUPANT LOAD
1	PORCH	237 SF		
2	MEETING ROOM	485 SF	50 SF	10
3	WARMING KITCHEN	56 SF	100 SF	1
4	CLOSET	53 SF	300 SF	1
5	BATH #1	57 SF	100 SF	1
6	BATH #2	60 SF	100 SF	1
7	OFFICE #1	110 SF	100 SF	2
8	OFFICE #2	99 SF	100 SF	2
9	OFFICE #3	153 SF	100 SF	2
10	MECHANICAL ROOM	55 SF	300 SF	1
11	STORAGE	1092 SF	500 SF	3
12	DRIVE THROUGH #1	1082 SF	500 SF	3
13	ELECTRONICS	476 SF	500 SF	2
14	CARDBOARD	193 SF	500 SF	1
15	BULB CRUSHER PAPER SHRED	324 SF	500 SF	1
16	BALER	128 SF	500 SF	1
17	LOOSE CARDBOARD	195 SF	500 SF	1
18	WAREHOUSE FLOOR	2168 SF	500 SF	5
19	DRIVE THROUGH #2	836 SF	500 SF	2
20	WORK AREA	373 SF	500 SF	1
GRAND TOTAL		8233 SF		41



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
FLOOR PLAN

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	1/15/26	UPDATED FLOOR DRAINS	HN
2	1/15/26	ADDED FINISH SCHEDULE	HN

JOB NUMBER:
25,484.071

DRAWN
BY: BMK

ENGINEERED
BY: TAM

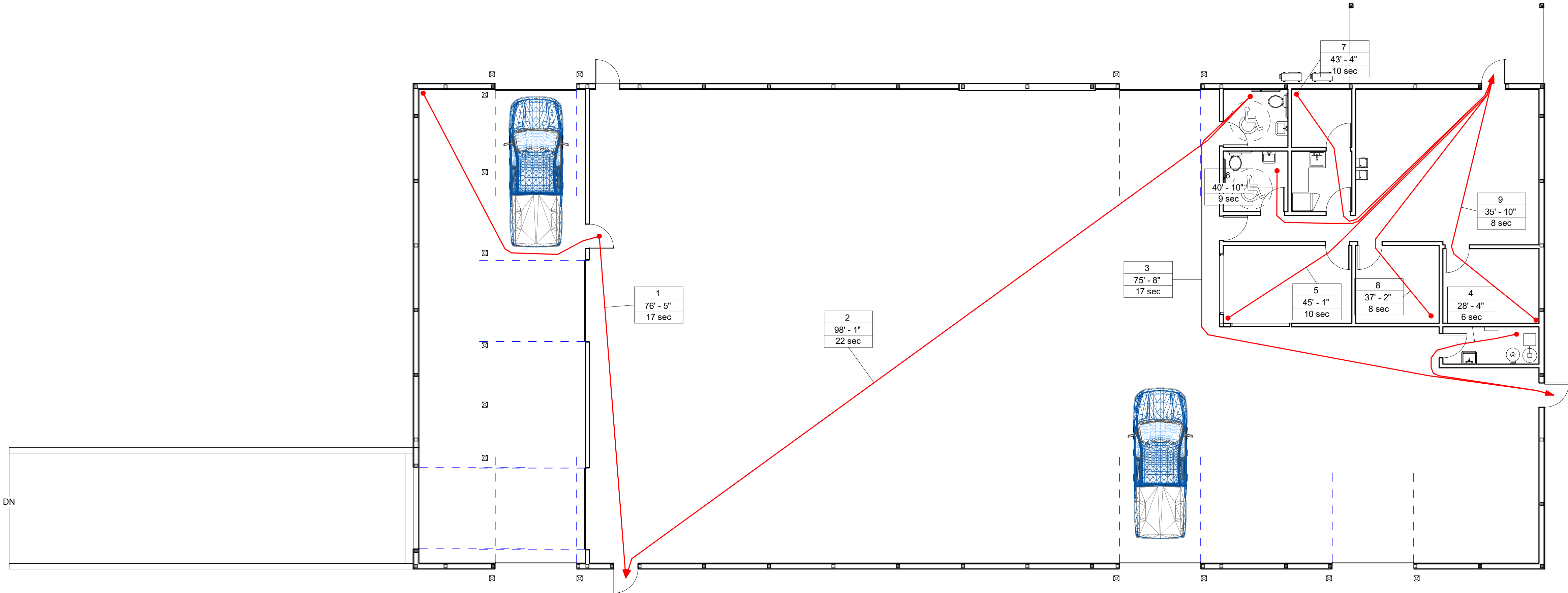
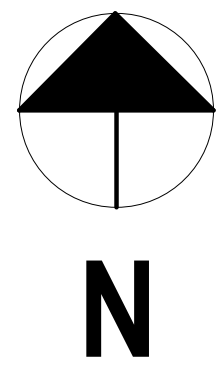
START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

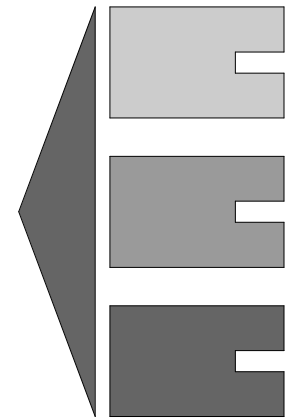
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PAGE NUMBER:

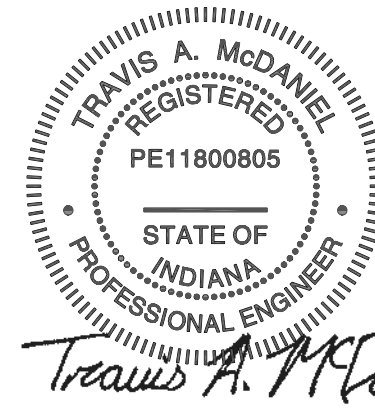


1 FIRE & LIFE SAFETY PLAN
1/8" = 1'-0"

PATH OF TRAVEL SCHEDULE			
MARK	LENGTH	SPEED	TIME
1	76' - 5 11/32"	3.0 mph	17.4 s
2	98' - 1 7/32"	3.0 mph	22.3 s
3	75' - 8 9/32"	3.0 mph	17.2 s
4	28' - 4 1/4"	3.0 mph	6.4 s
5	45' - 1 7/16"	3.0 mph	10.3 s
6	40' - 10 1/8"	3.0 mph	9.3 s
7	43' - 4 1/16"	3.0 mph	9.8 s
8	37' - 1 17/32"	3.0 mph	8.4 s
9	35' - 10 11/32"	3.0 mph	8.2 s



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PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
FIRE & LIFE SAFETY
PLAN

REVISIONS:

NO.	DATE	DESCRIPTION	BY
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JOB NUMBER:
25.484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

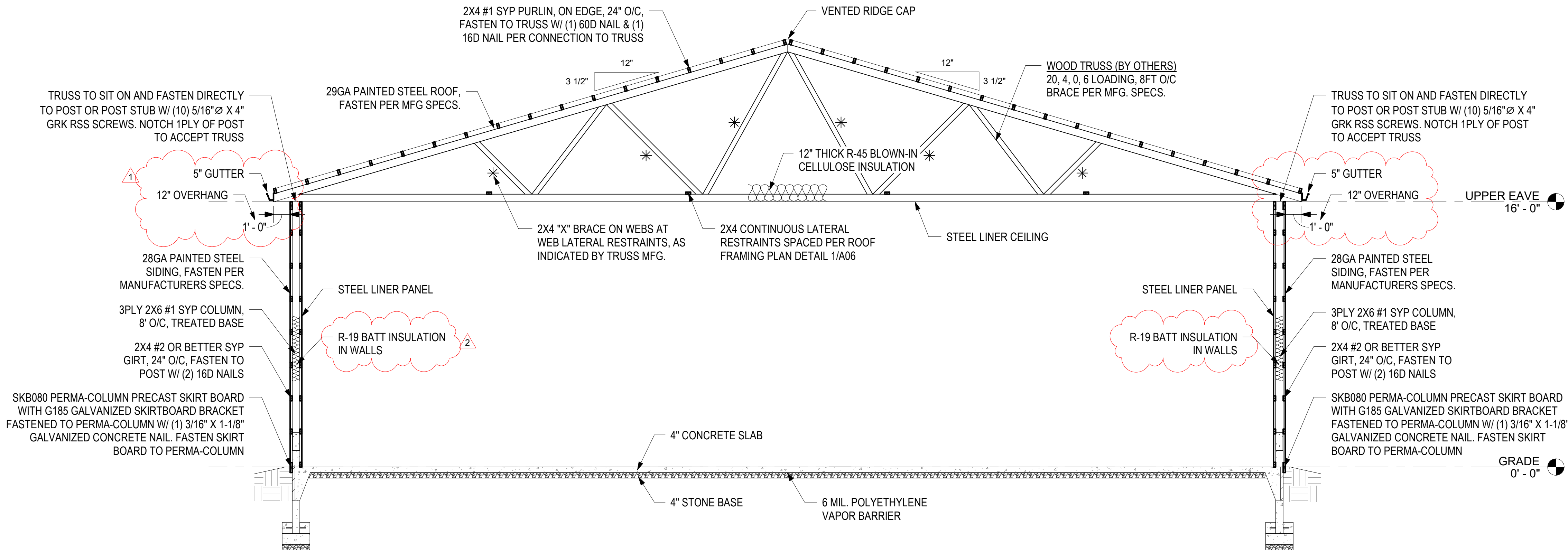
START DATE: 06/03/25

PROGRESS DATE:

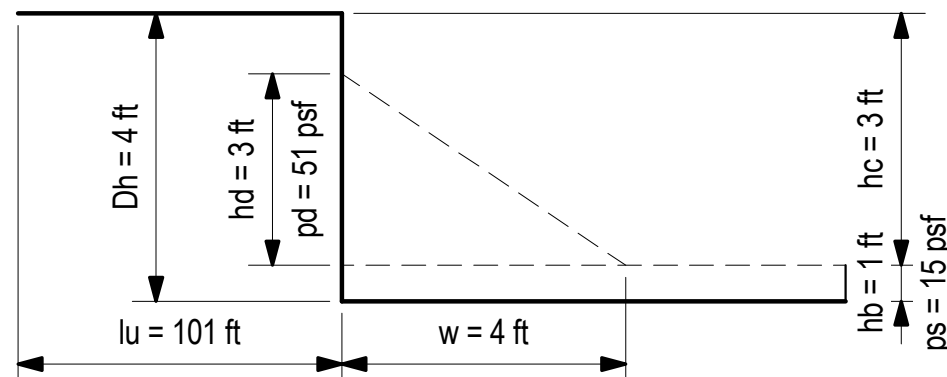
CERTIFIED DATE: 03/11/26

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

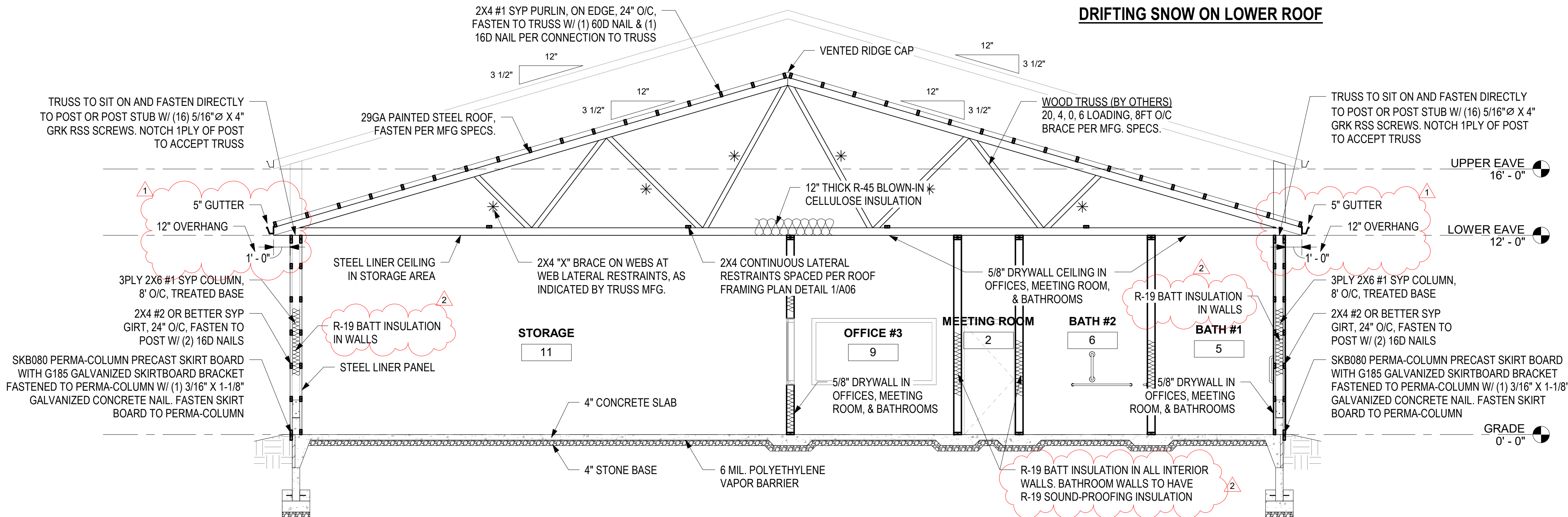
PAGE NUMBER:



1 BUILDING CROSS SECTION
1/4" = 1'-0"



DRIFTING SNOW ON LOWER ROOF



2 LOWER BUILDING CROSS SECTION
1/4" = 1'-0"



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
SECTION VIEWS &
DETAILS

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	1/15/26	UPDATED OVERHANG & GUTTER	HN
2	1/15/26	UPDATED WALL INSULATION	HN

JOB NUMBER:
25,484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

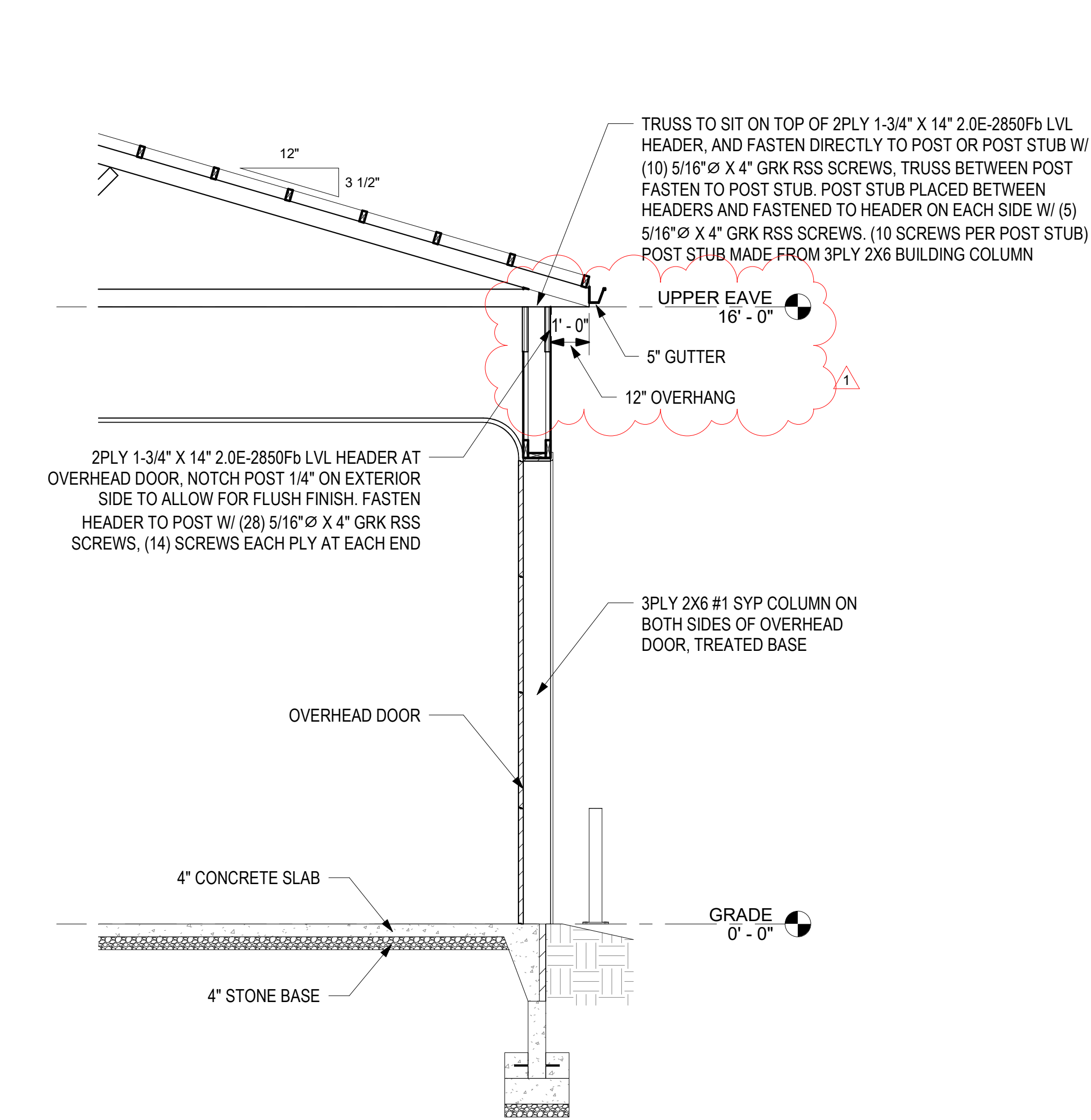
START DATE: 06/03/25

PROGRESS DATE:

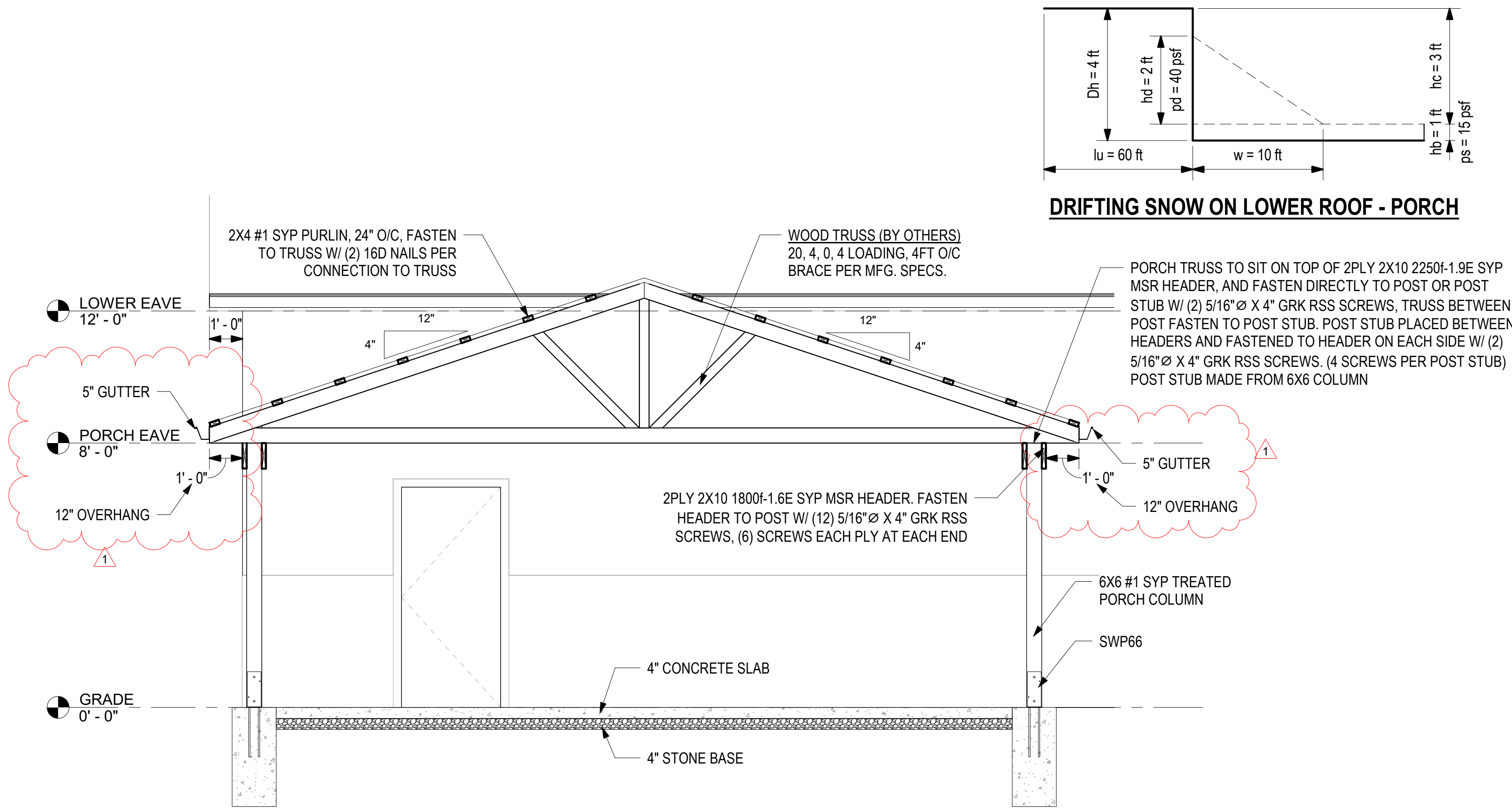
CERTIFIED DATE: 03/11/26

SCALE: As indicated

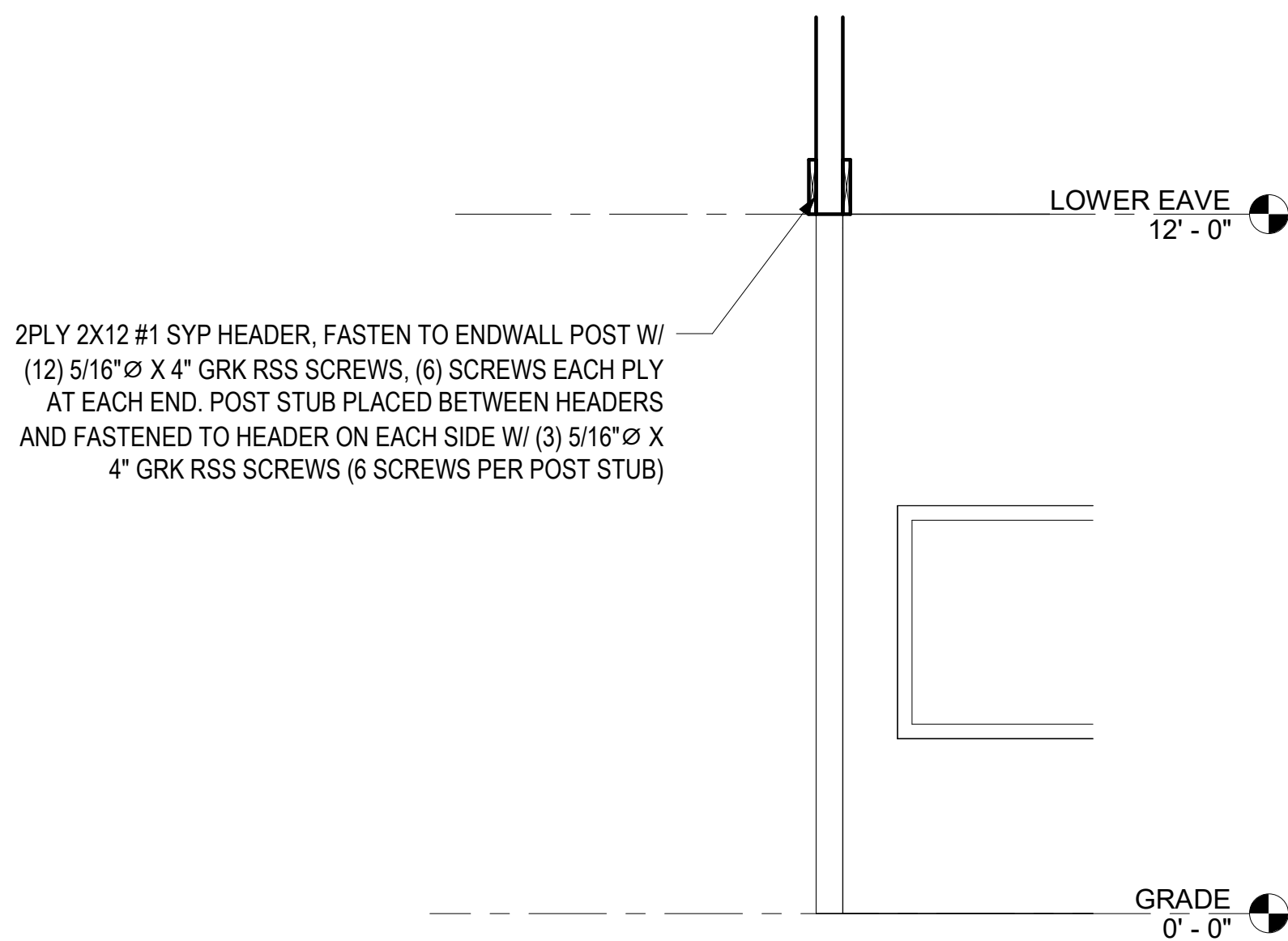
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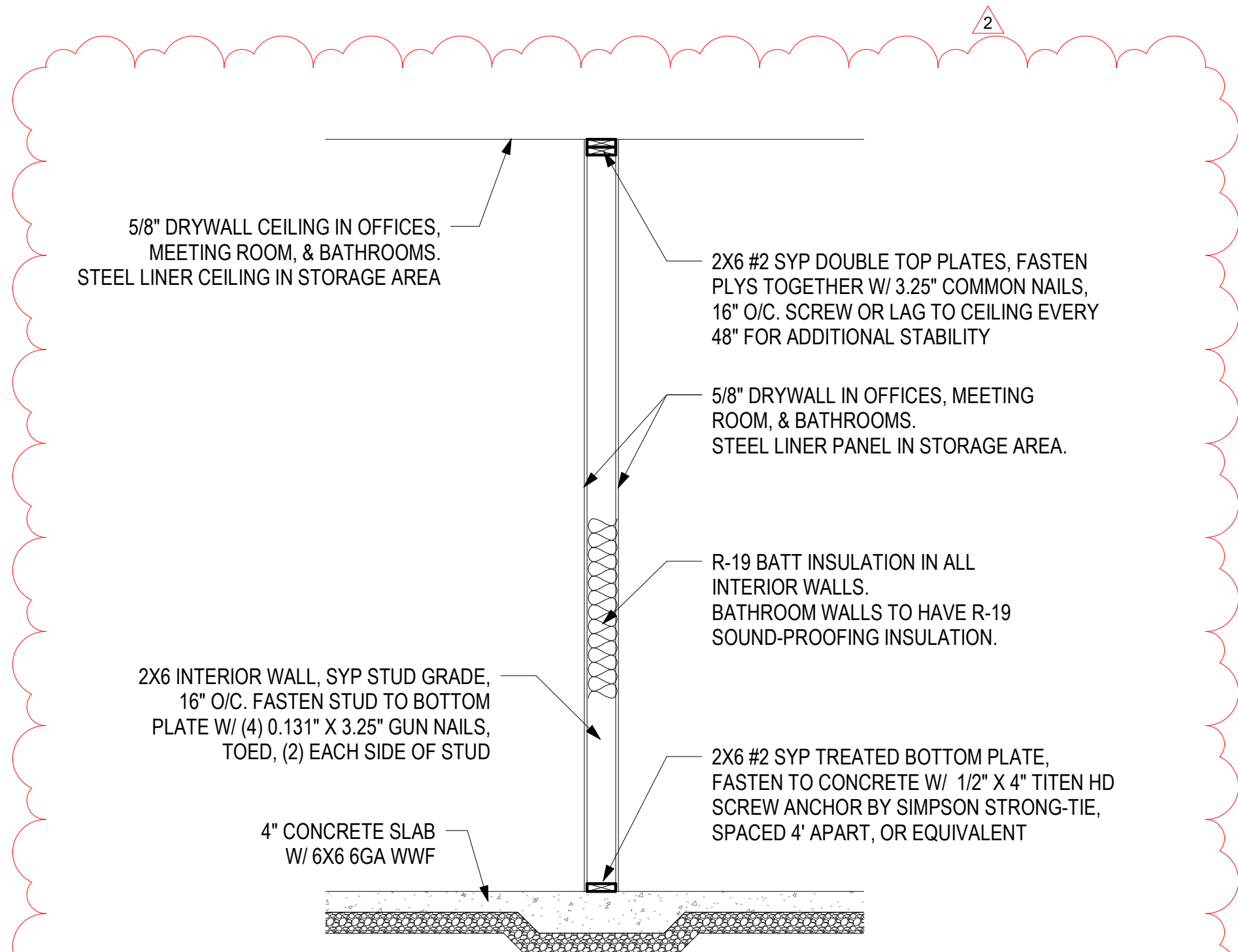
1 OVERHEAD DOOR HEADER DETAIL
3/8" = 1'-0"



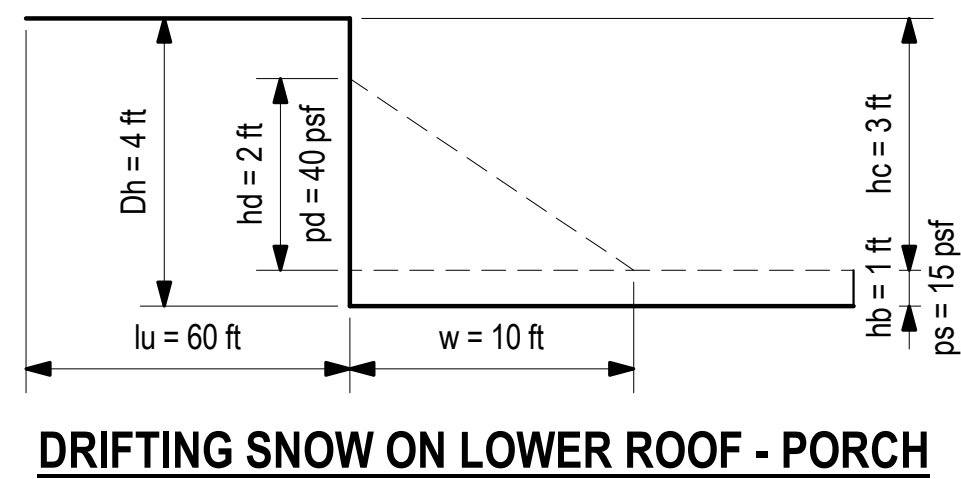
2 PORCH SECTION DETAIL
3/8" = 1'-0"



4 HEADER DETAIL AT TRANSITION WALL
3/8" = 1'-0"



5 INTERIOR 2X6 WALL SECTION DETAIL
1/2" = 1'-0"



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PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
SECTION VIEWS &
DETAILS (CONT.)

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	1/15/26	UPDATED OVERHANG & GUTTER	HN
2	1/15/26	UPDATED WALL INSULATION	HN

JOB NUMBER:
25,484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

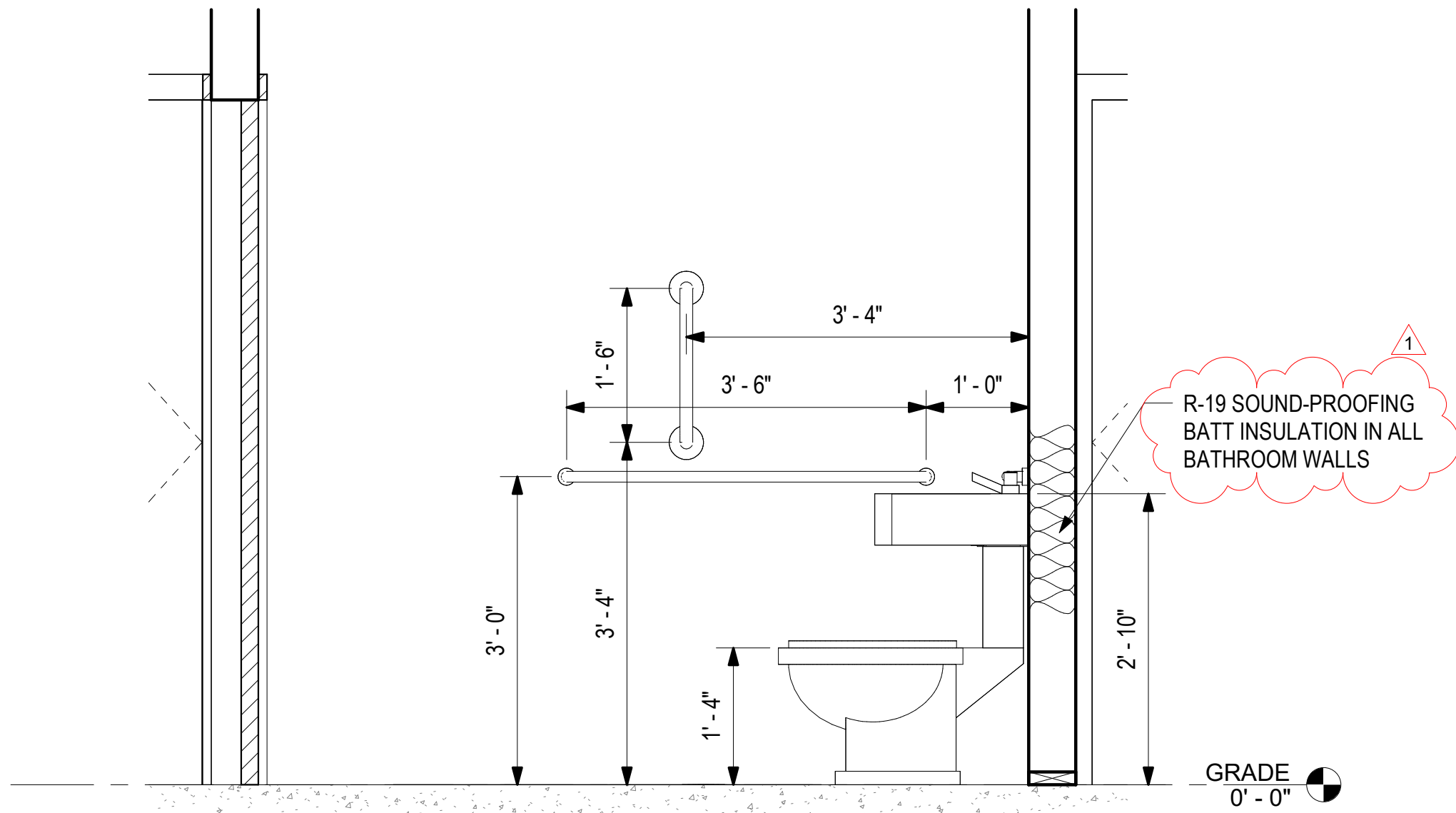
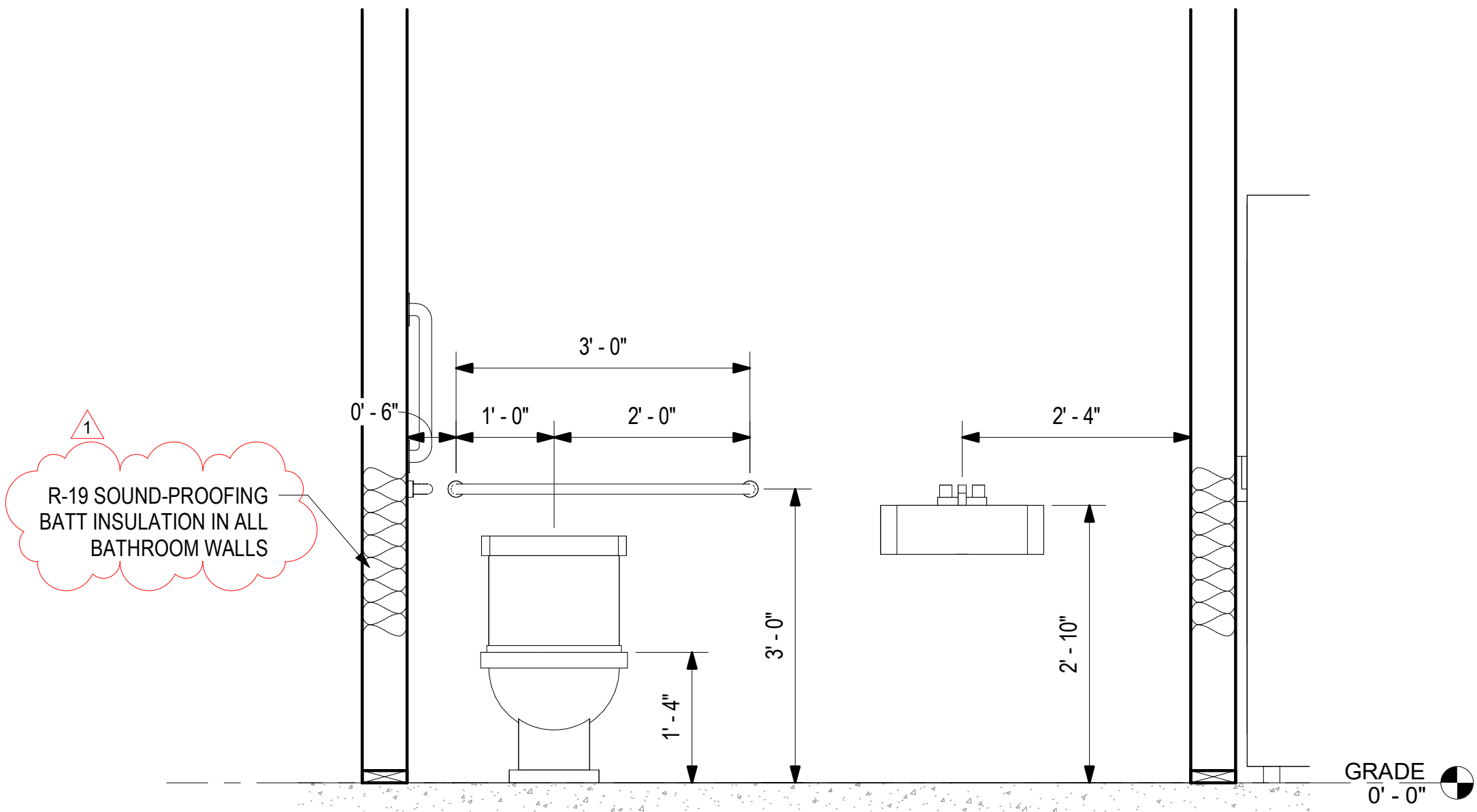
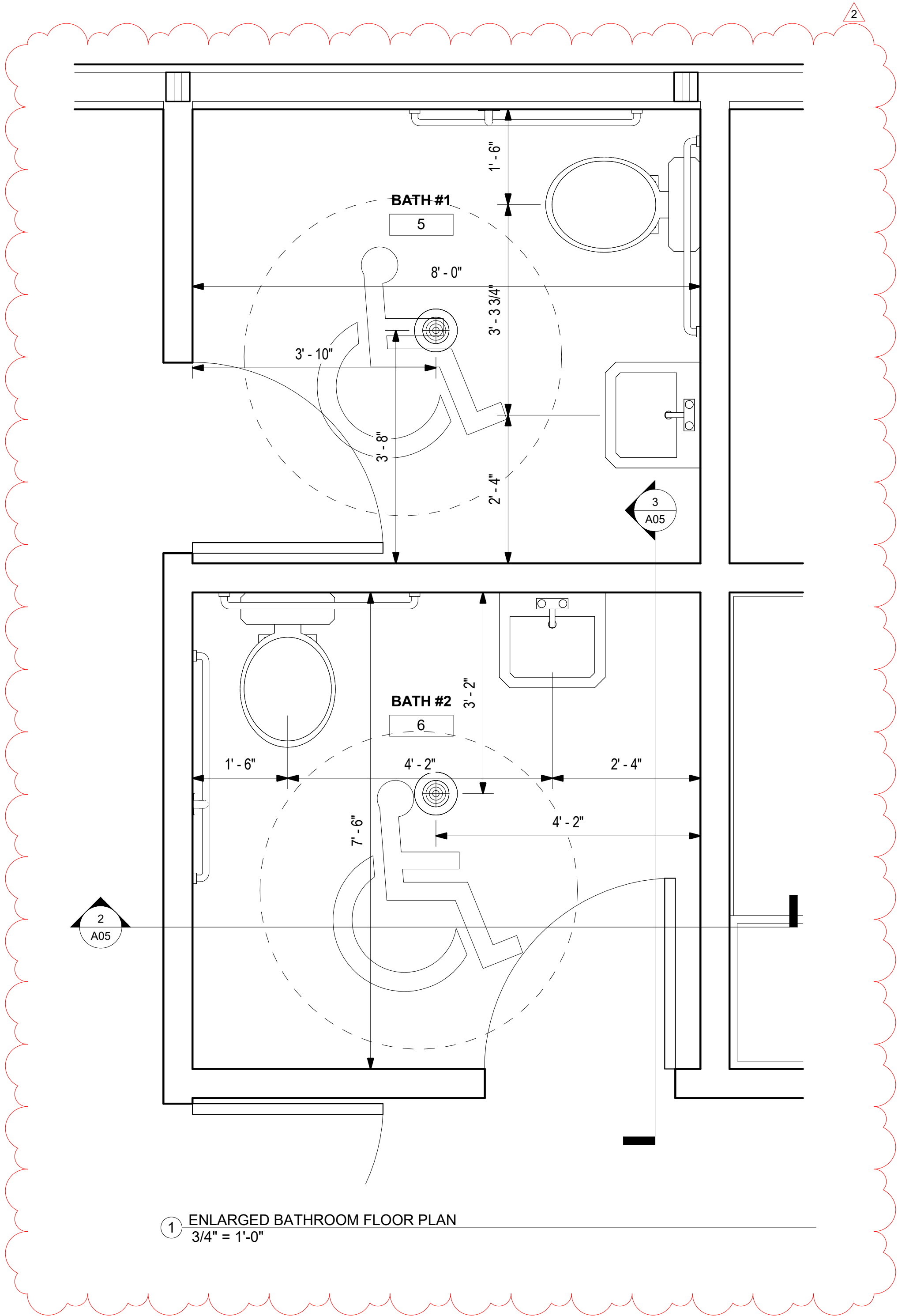
START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
ADA BATHROOM
SECTION VIEWS &
DETAILS

REVISIONS:

NO.	DATE	DESCRIPTION	BY
2	1/15/26	UPDATED FLOOR DRAINS	HN
1	1/15/26	UPDATED WALL INSULATION	HN

JOB NUMBER:
25.484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

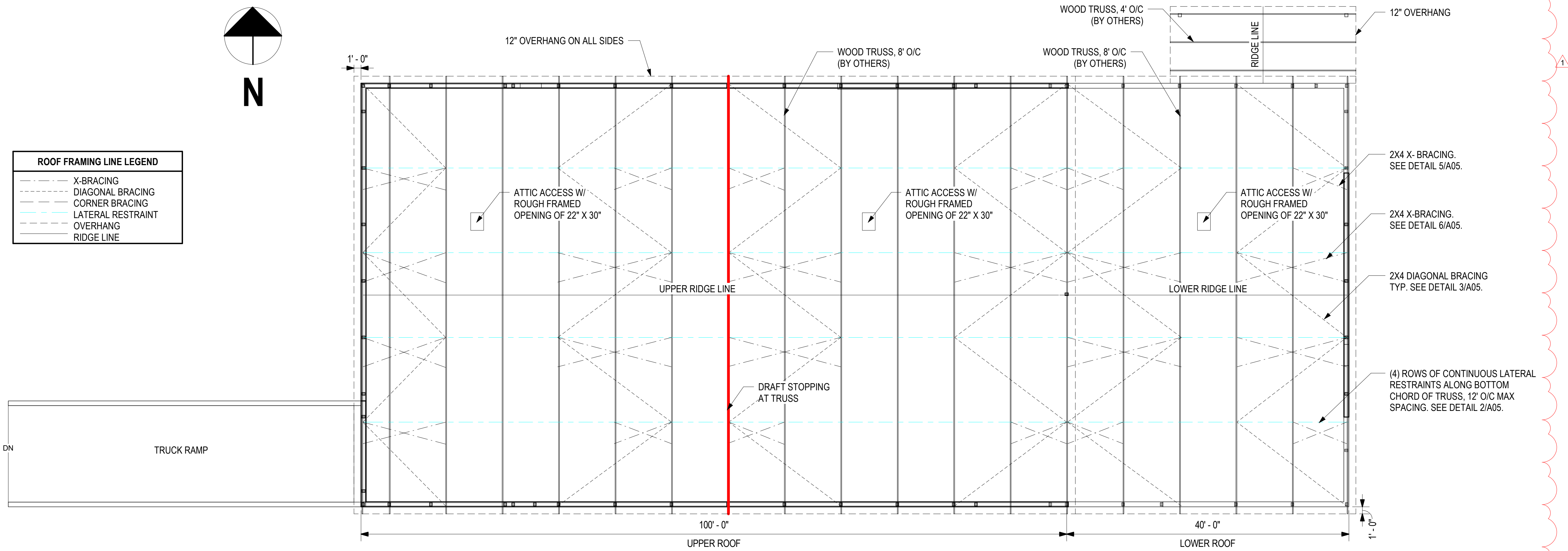
START DATE: 06/03/25

PROGRESS DATE:

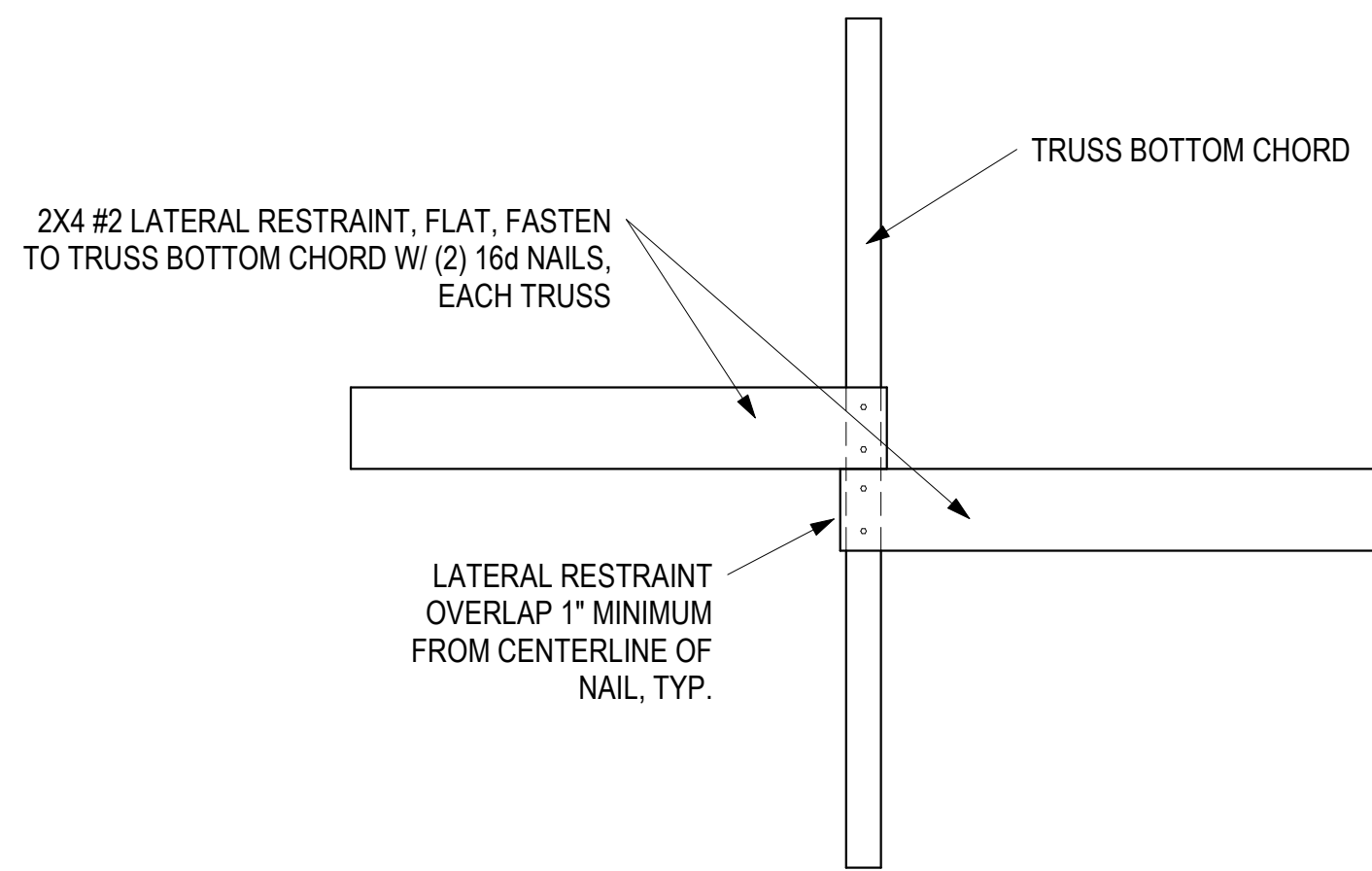
CERTIFIED DATE: 03/11/26

SCALE: 3/4" = 1'-0"

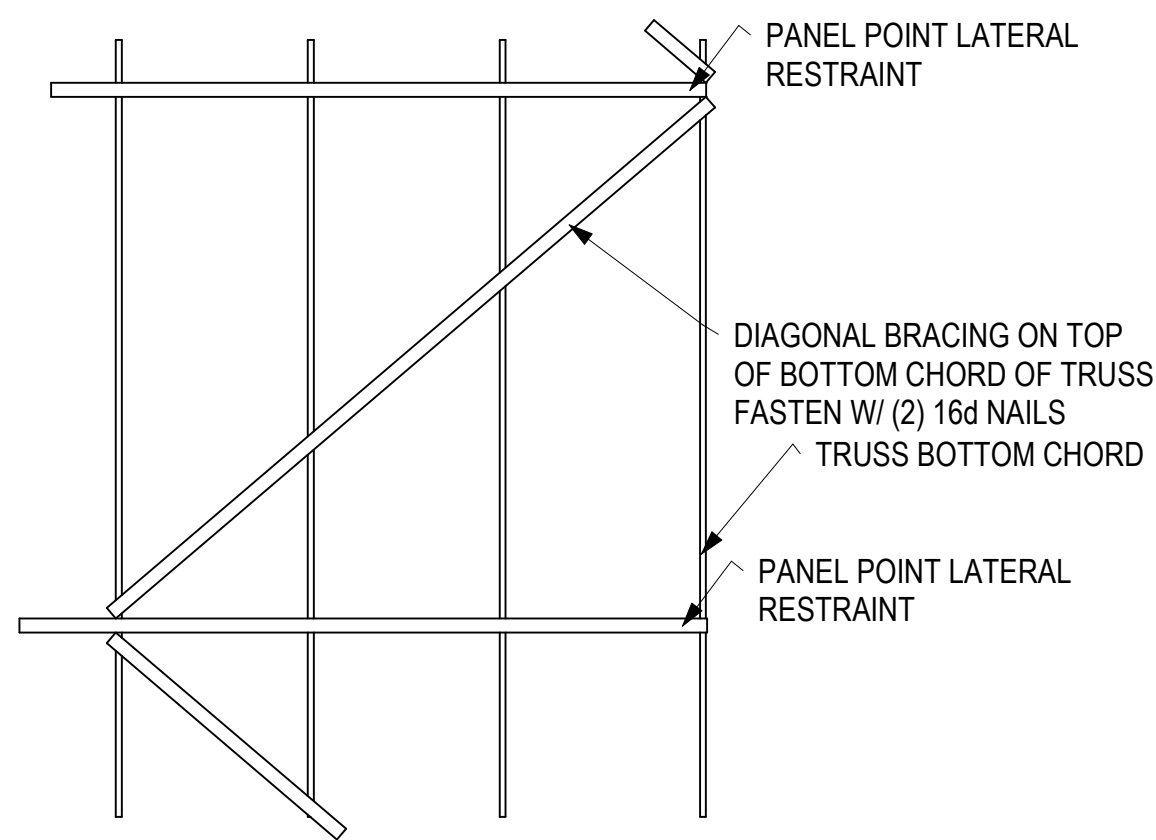
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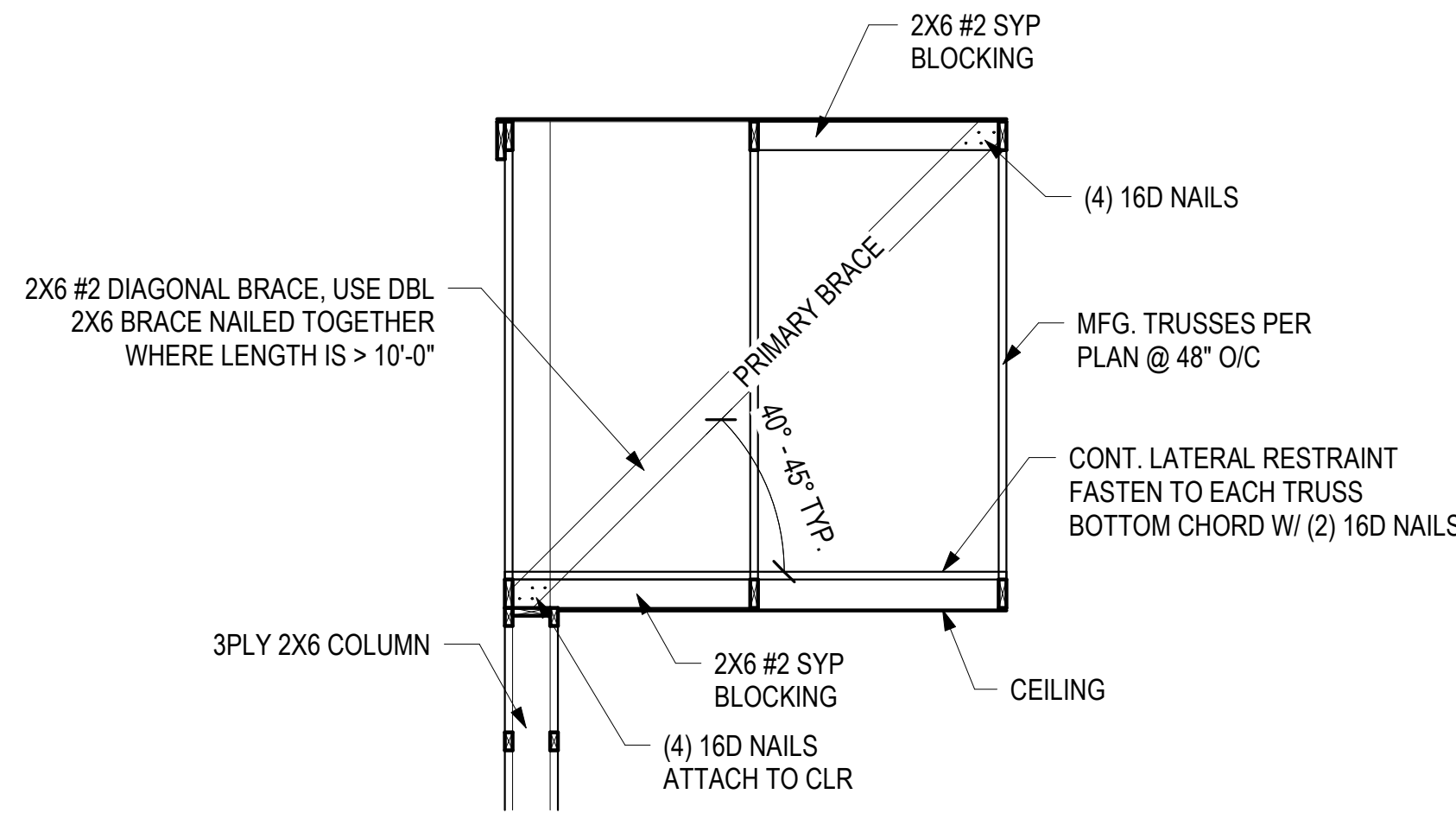
1 ROOF FRAMING PLAN
1/8" = 1'-0"



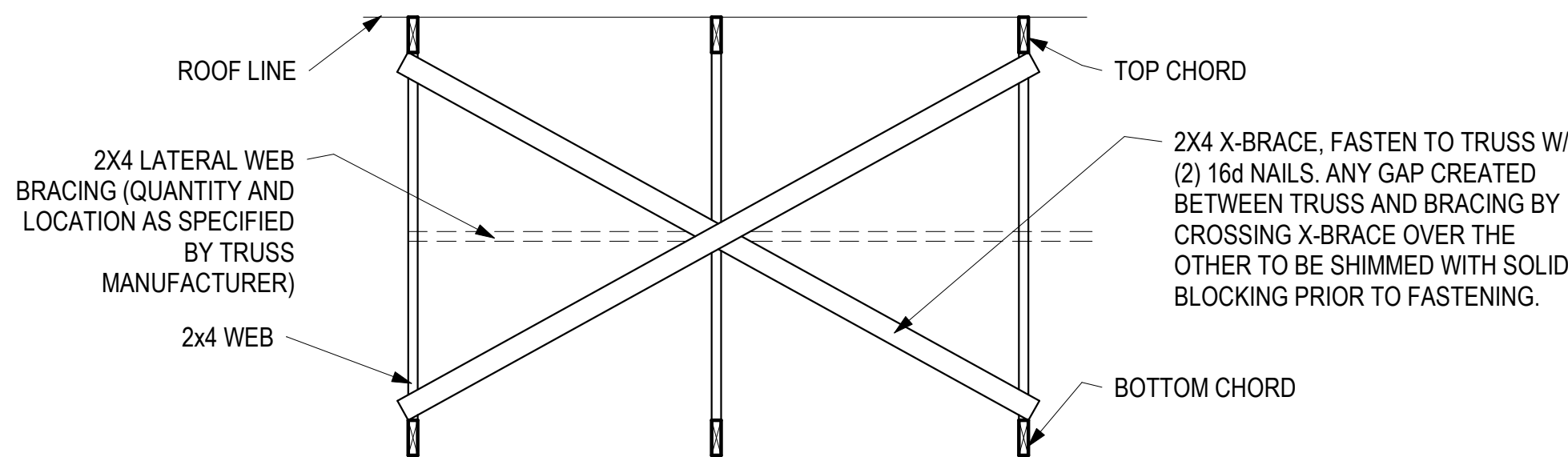
2 LATERAL RESTRAINT END LAP DETAIL
1 1/2" = 1'-0"



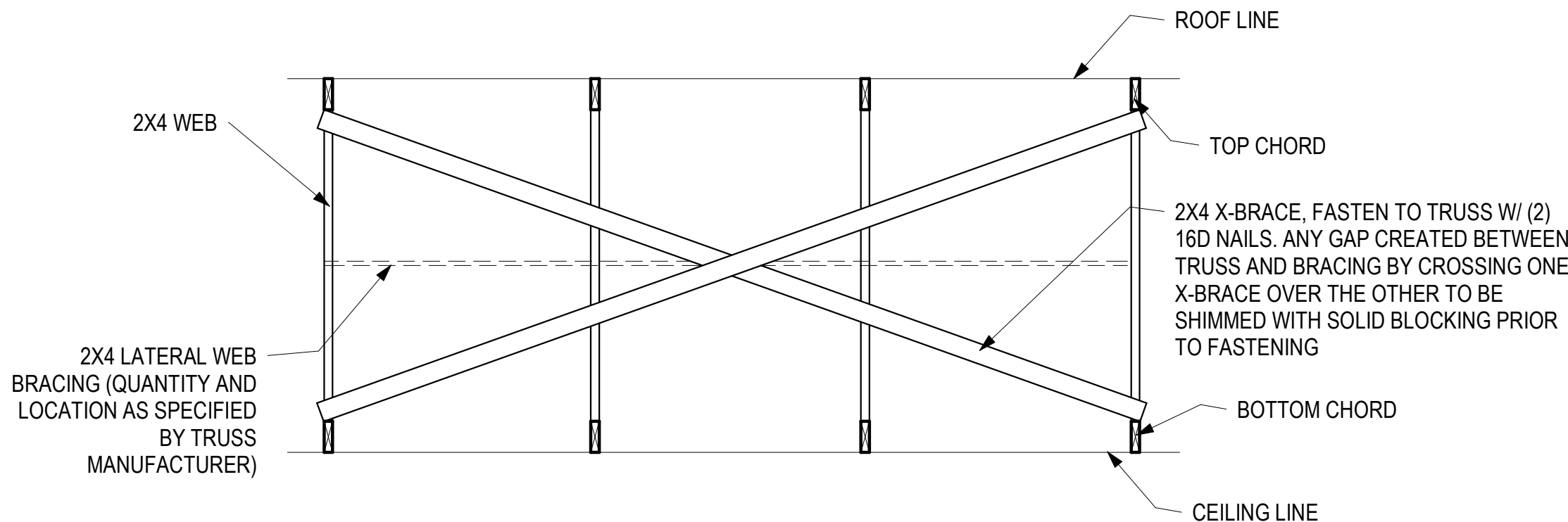
3 DIAGONAL BRACING DETAIL
1/4" = 1'-0"



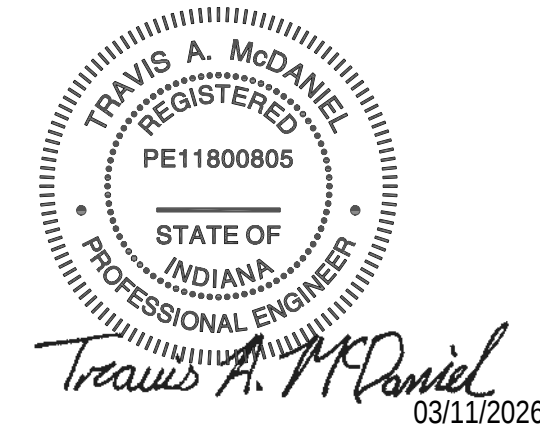
4 GABLE END WALL BRACE
3/8" = 1'-0"



5 X-BRACING DETAIL - ACROSS (3) TRUSSES
1/2" = 1'-0"



6 X-BRACING DETAIL - ACROSS (4) TRUSSES
1/2" = 1'-0"



PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
ROOF FRAMING PLAN

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	1/15/26	UPDATED OVERHANG & GUTTER	HN

JOB NUMBER:
25,484,071

DRAWN BY: TAM

ENGINEERED BY: TAM

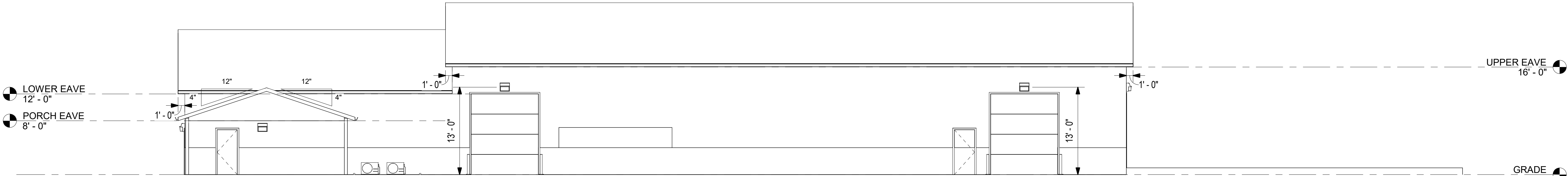
START DATE: 06/03/25

PROGRESS DATE:

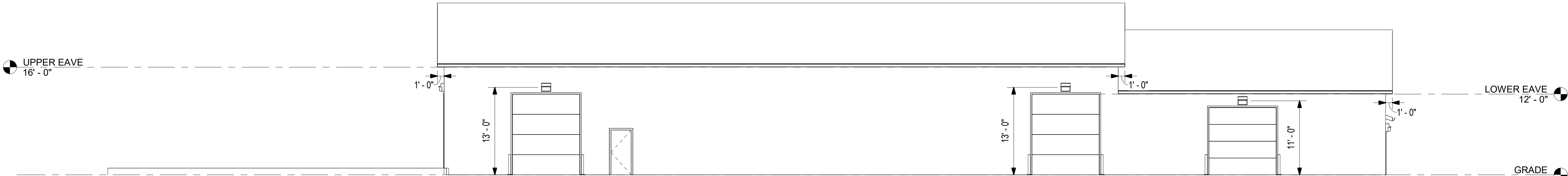
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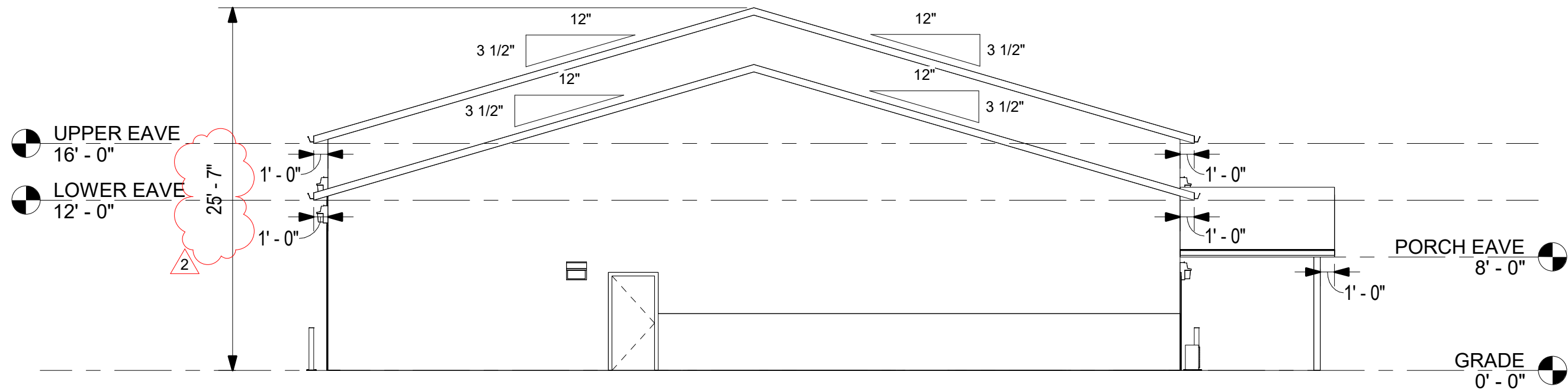
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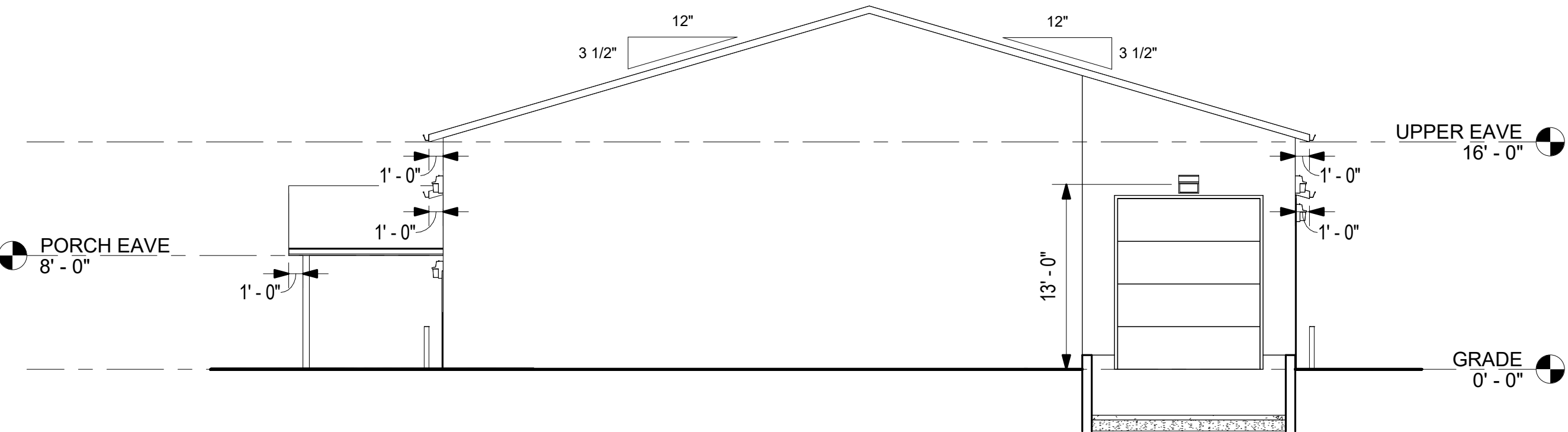
1 NORTH VIEW LOOKING SOUTH
1/8" = 1'-0"



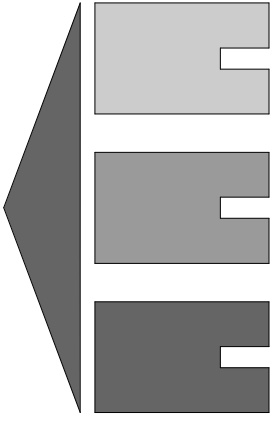
2 SOUTH VIEW LOOKING NORTH
1/8" = 1'-0"



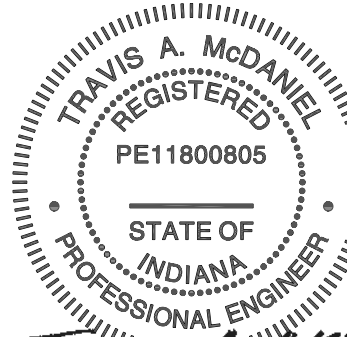
3 EAST VIEW LOOKING WEST
1/8" = 1'-0"



4 WEST VIEW LOOKING EAST
1/8" = 1'-0"



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Travis A. McDaniel
03/11/2026

PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
ELEVATIONS

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	1/15/26	UPDATED OVERHANG & GUTTER	HN
2	1/15/26	REVISED BUILDING HEIGHT	HN

JOB NUMBER:
25.484.071

DRAWN BY: TAM

ENGINEERED BY: TAM

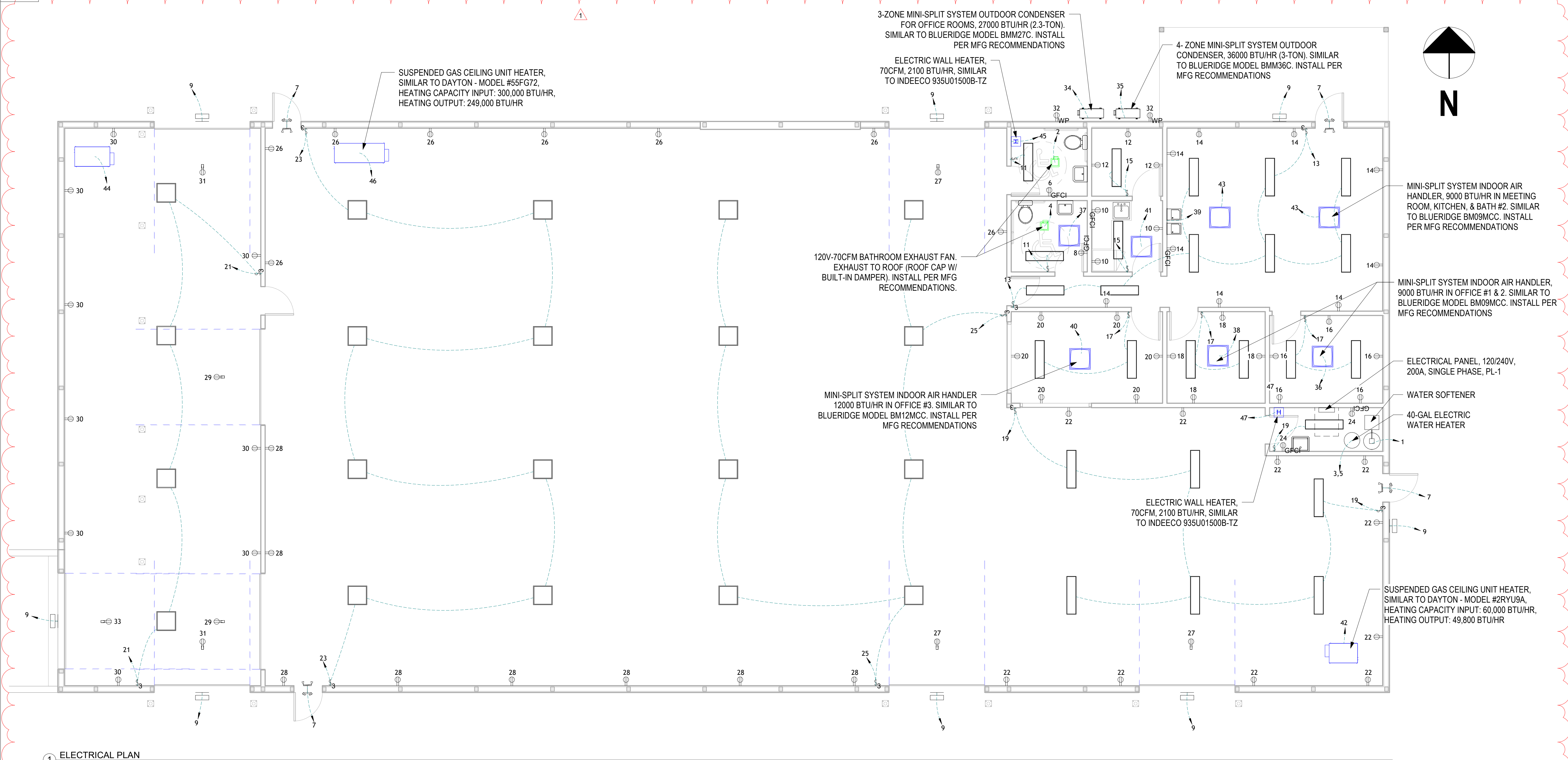
START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

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

PAGE NUMBER:



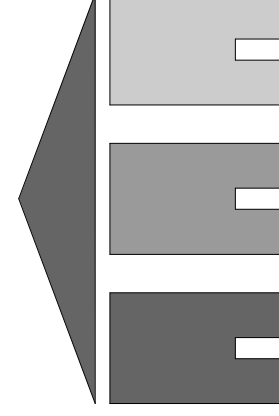
1 ELECTRICAL PLAN
3/16" = 1'-0"

ELECTRICAL SYMBOL LEGEND	
OUTLETS	
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, GFCI
	DUPLEX RECEPTACLE, WEATHERPROOF GFCI
	220-VOLT RECEPTACLE
	WIFI ACCESS
	TELEPHONE OUTLET
SWITCHES	
	SINGLE POLE SWITCH
	OCCUPANCY SENSOR SWITCH
	3-WAY SWITCH
	WALL SWITCH DIMMER 0-10V
	WALL OCCUPANCY/DIMMER SWITCH
	CEILING 360 DEGREE MOTION SENSOR

ELECTRICAL SYMBOL LEGEND
1/4" = 1'-0"

LIGHT FIXTURE SYMBOL LEGEND & SCHEDULE	
	2' X 2' HIGH BAY LED FIXTURE, 210 WATT, 5000K, 28560 LUMENS. SIMILAR TO SYLVANIA VALUELED LNHB3A/210UNVD850/22W/WH/L7
	1' X 4' PANEL LED, CEILING OR SURFACE MOUNT LIGHT FIXTURE, 55 WATT, SIMILAR TO SYLVANIA LEDVANCE PANELFV055UNHD8SC224FMWHG1
	20 WATT LED EXTERIOR WALL MOUNTED LIGHT FIXTURE (WALL PACK) WITH PHOTOCELL. SIMILAR TO SYLVANIA LEDVANCE WALPAKN9AS040UNHD8SC2BZPE. MOUNTING HEIGHT ABOVE OVERHEAD DOORS VARIES FROM 11FT TO 13FT.
	SELF-POWERED EMERGENCY EXIT LIGHT W/ DUAL HEAD AND REMOTE. EXTERIOR DUAL HEAD (NEAR THE DOOR) EMERGENCY LIGHTING & CHARGER WITH EMERGENCY BATTERY BACKUP FOR A DURATION OF NOT LESS THAN 1-1/2 HOURS.

LIGHT FIXTURE SYMBOL LEGEND & SCHEDULE
1/4" = 1'-0"



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PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
ELECTRICAL PLAN

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	3/11/26	REVISED ELECTRICAL PANEL, OUTLETS, BREAKER & PANEL SCHEDULE	HN

JOB NUMBER:
25,484.071

DRAWN BY: HN

ENGINEERED BY: HN

START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE: As indicated

PAGE NUMBER:

Branch Panel: PL-1
Location: MECHANICAL ROOM 10
Supply From:
Mounting: Surface
Enclosure:

Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating:
Mains Type:
Mains Rating: 200 A
MCB Rating: 200 A

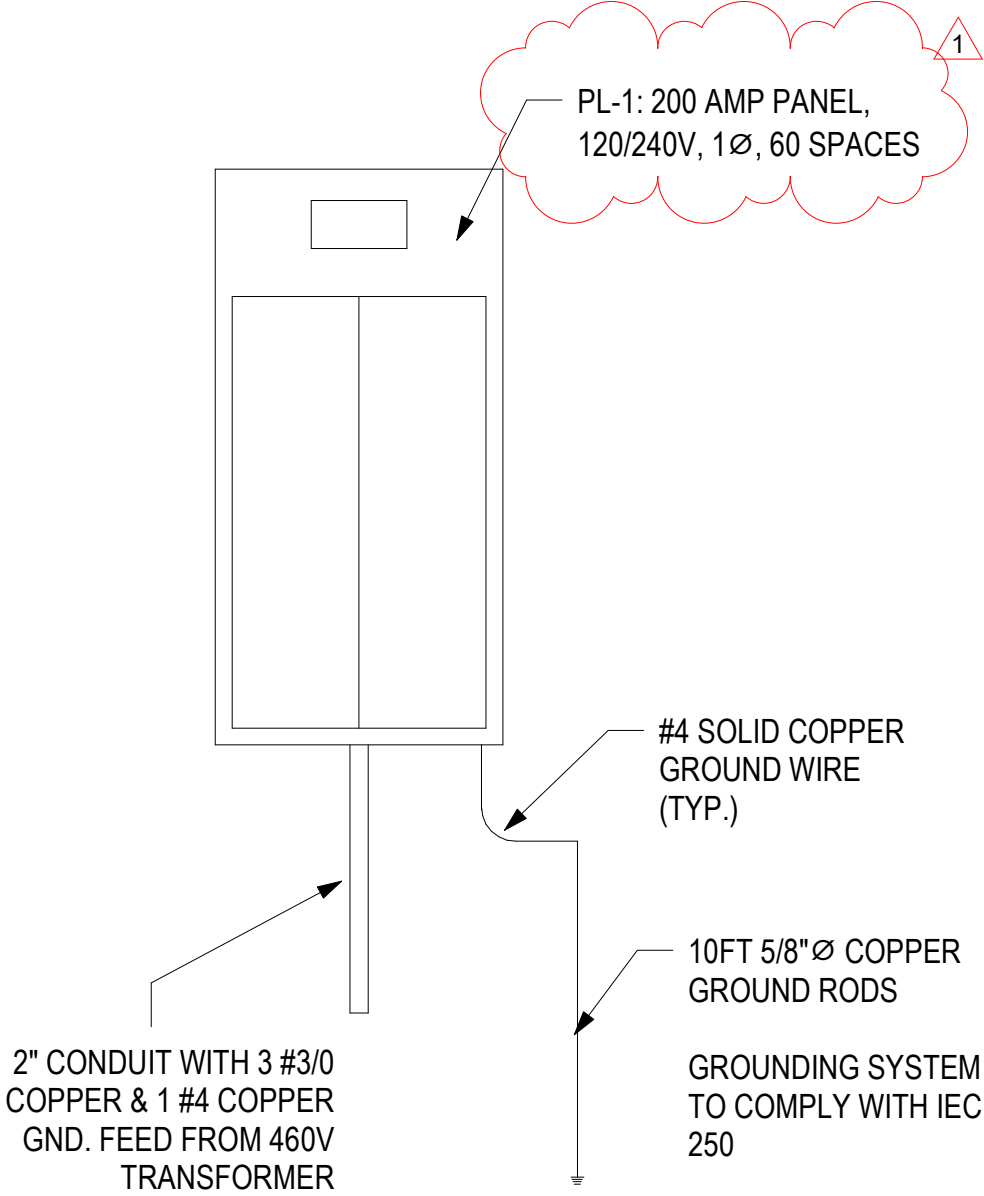
Notes:

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	WATER SOFTENER	20 A	1	10 VA	120 VA			1	20 A	BATHROOM EXHAUST FAN - BATH #1	2
3	ELECTRIC WATER HEATER	30 A	2			2250 VA	120 VA	1	20 A	BATHROOM EXHAUST FAN - BATH #2	4
5	--	--	--	2250 VA	180 VA			1	20 A	GFCI RECEPTACLE - BATH #1	6
7	EMERGENCY EXIT SIGNS	15 A	1			400 VA	180 VA	1	20 A	GFCI RECEPTACLE - BATH #2	8
9	EXTERIOR WALLPACK LIGHTING	15 A	1	560 VA	720 VA			1	20 A	RECEPTACLES - WARMING KITCHEN	10
11	LIGHTING - BATH #1 & BATH #2	15 A	1			80 VA	540 VA	1	20 A	RECEPTACLES - CLOSET	12
13	LIGHTING - MEETING ROOM	15 A	1	320 VA	1620 VA			1	20 A	RECEPTACLES - MEETING ROOM	14
15	LIGHTING - WARMING KITCHEN & CLOSET	15 A	1			80 VA	900 VA	1	20 A	RECEPTACLES - OFFICE #1	16
17	LIGHTING - OFFICE #1, #2, & #3	15 A	1	240 VA	720 VA			1	20 A	RECEPTACLES - OFFICE #2	18
19	LIGHTING - STORAGE AREA & MECHANICAL ROOM	15 A	1			280 VA	1080 VA	1	20 A	RECEPTACLES - OFFICE #3	20
21	LIGHTING - DRIVE THROUGH #2 & WORK AREA	15 A	1	840 VA	1800 VA			1	20 A	RECEPTACLES - STORAGE AREA	22
23	LIGHTING - WAREHOUSE FLOOR (WEST SIDE)	15 A	1			1680 VA	360 VA	1	20 A	GFCI RECEPTACLES - MECHANICAL ROOM	24
25	LIGHTING - WAREHOUSE FLOOR (EAST SIDE)	15 A	1	1680 VA	1440 VA			1	20 A	RECEPTACLES - WAREHOUSE (NORTH WALL)	26
27	OVH DOOR RECEPTACLES - DRIVE THROUGH #1 &...	20 A	1			540 VA	1440 VA	1	20 A	RECEPTACLES - WAREHOUSE (SOUTH WALL)	28
29	OVH DOOR RECEPTACLES - INTERIOR OVH DOORS	20 A	1	360 VA	1620 VA			1	20 A	RECEPTACLES - DRIVE THROUGH #2 & WORK AREA	30
31	OVH DOOR RECEPTACLES - DRIVE THROUGH #2...	20 A	1			360 VA	360 VA	1	30 A	OUTDOOR RECEPTACLES - GFCI WEATHERPROOF...	32
33	OVH DOOR RECEPTACLE - DOCK AREA	20 A	1	180 VA	3140 VA			1	30 A	3-ZONE MINI-SPLIT OUTDOOR CONDENSER	34
35	4-ZONE MINI-SPLIT OUTDOOR CONDENSER	40 A	1			3140 VA	5096 VA	1	30 A	MINI-SPLIT INDOOR AIR HANDLER - OFFICE #1	36
37	MINI-SPLIT INDOOR AIR HANDLER - BATH #2	30 A	1	5096 VA	5096 VA			1	30 A	MINI-SPLIT INDOOR AIR HANDLER - OFFICE #2	38
39	DRINKING FOUNTAIN	20 A	1			600 VA	5096 VA	1	30 A	MINI-SPLIT INDOOR AIR HANDLER - OFFICE #3	40
41	MINI-SPLIT INDOOR AIR HANDLER - WARMING KITCHEN	30 A	1	5096 VA	1392 VA			1	20 A	UNIT HEATER - STORAGE	42
43	MINI-SPLIT INDOOR AIR HANDLERS - MEETING ROOM	30 A	1			10192 VA	1392 VA	1	20 A	UNIT HEATER - DRIVE THROUGH #2 & WORK AREA	44
45	WALL HEATER - BATH #1	20 A	1	1500 VA	1392 VA			1	20 A	UNIT HEATER - WAREHOUSE FLOOR	46
47	WALL HEATER - MECHANICAL ROOM	20 A	1			1500 VA					48
49											50
51											52
53											54
55											56
57											58
59											60
Total Load:				36822 VA		37152 VA					
Total Amps:				307 A		310 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Appliance - Dwelling Unit	4510 VA	100.00%	4510 VA		
HVAC	6520 VA	100.00%	6520 VA	Total Conn. Load:	73973 VA
Heating	3000 VA	100.00%	3000 VA	Total Est. Demand:	70529 VA
Lighting - Dwelling Unit	5200 VA	72.50%	3770 VA	Total Conn.:	308 A
Lighting - Exterior	560 VA	125.00%	700 VA	Total Est. Demand:	294 A
Other	40448 VA	100.00%	40448 VA		
Receptacle	14400 VA	84.72%	12200 VA		
Lighting	400 VA	100.00%	400 VA		

Notes:



POWER RISER DIAGRAM
NOT TO SCALE

MAIN BREAKERS TO BE 50,000 AIC RATED
ALL BREAKERS TO BE 10,000 AIC RATED

WIRE AND CONDUIT SIZE SCHEDULE

AMPS	WIRE SIZE	CONDUIT SIZE
20A	#12	3/4"
25A	#10	3/4"
30A	#10	3/4"
35A	#8	1"
50A	#8	1"
60A	#6	1"
85A	#4	1 1/4"
100A	#3	1 1/2"
200A	#3/0 THHN	2"

INSULATION TYPE FOR 75° C THHN OR THWN
DEPENDING ON LOCATION AND ALL
EQUIPMENT AND TERMINATIONS. ANY OTHER
DIFFERENCES IN INSTALLATIONS SHALL BE
GIVEN TO PLAN REVIEW AND PROVIDE
CATALOG CUT SHEETS.

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PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
ELECTRICAL PANEL

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	3/11/26	REVISED ELECTRICAL PANEL, OUTLETS, BREAKER & PANEL SCHEDULE	HN

JOB NUMBER:
25.484.071

DRAWN BY: HN

ENGINEERED BY: HN

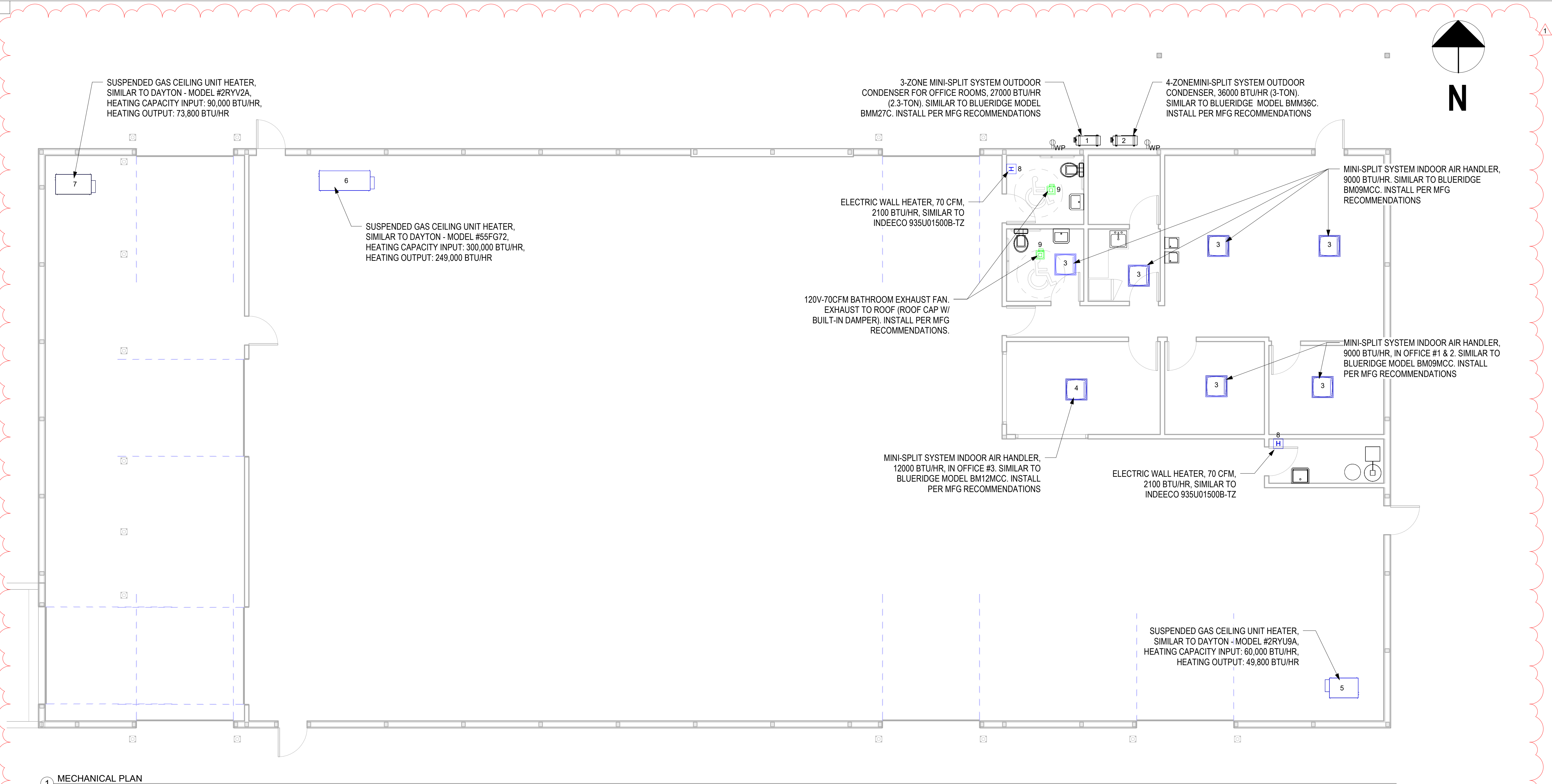
START DATE: 06/03/25

PROGRESS DATE:

CERTIFIED DATE: 03/11/26

SCALE:

PAGE NUMBER:



1 MECHANICAL PLAN
3/16" = 1'-0"

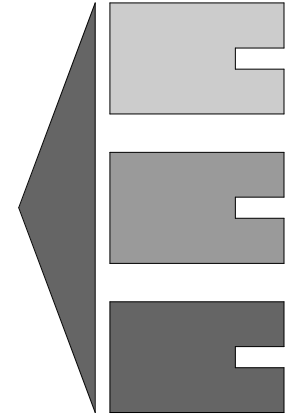
MECHANICAL EQUIPMENT SCHEDULE				
TYPE MARK	DESCRIPTION	MODEL NUMBER	MANUFACTURER	QTY
1	27,000 BTU 3-ZONE DUCTLESS MINI SPLIT OUTDOOR CONDENSER	BMM27C	BLUERIDGE	1
2	36,000 BTU 4-ZONE DUCTLESS MINI SPLIT OUTDOOR CONDENSER	BMM36C	BLUERIDGE	1
3	9,000 BTU CEILING CASSETTE AIR HANDLER	BM09MCC	BLUERIDGE	6
4	12,000 BTU CEILING CASSETTE AIR HANDLER	BM12MCC	BLUERIDGE	1
5	60K BTU SUSPENDED GAS CEILING UNIT HEATER	2RYU9A	DAYTON	1
6	300K BTU SUSPENDED GAS CEILING UNIT HEATER	55FG72	DAYTON	1
7	90K BTU SUSPENDED GAS CEILING UNIT HEATER	2RYV2A	DAYTON	1
8	70 CFM ELECTRIC WALL HEATER	935U01500B-TZ	INDEECO	2
9	70 CFM BATHROOM VENTILATION FAN	00026715163014	BROAN-NUTONE	2

LEGEND

- RETURN DUCT
- SUPPLY DUCT
- EXHAUST DUCT

NOTE:

ALL HVAC PIPING SHALL BE INSULATED W/ 1" PIPE INSULATION.



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PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
MECHANICAL PLAN

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	1/15/26	ADDED MECHANICAL & PLUMBING PLANS	HN

JOB NUMBER:
25,484.071

DRAWN
BY: HN

ENGINEERED
BY: HN

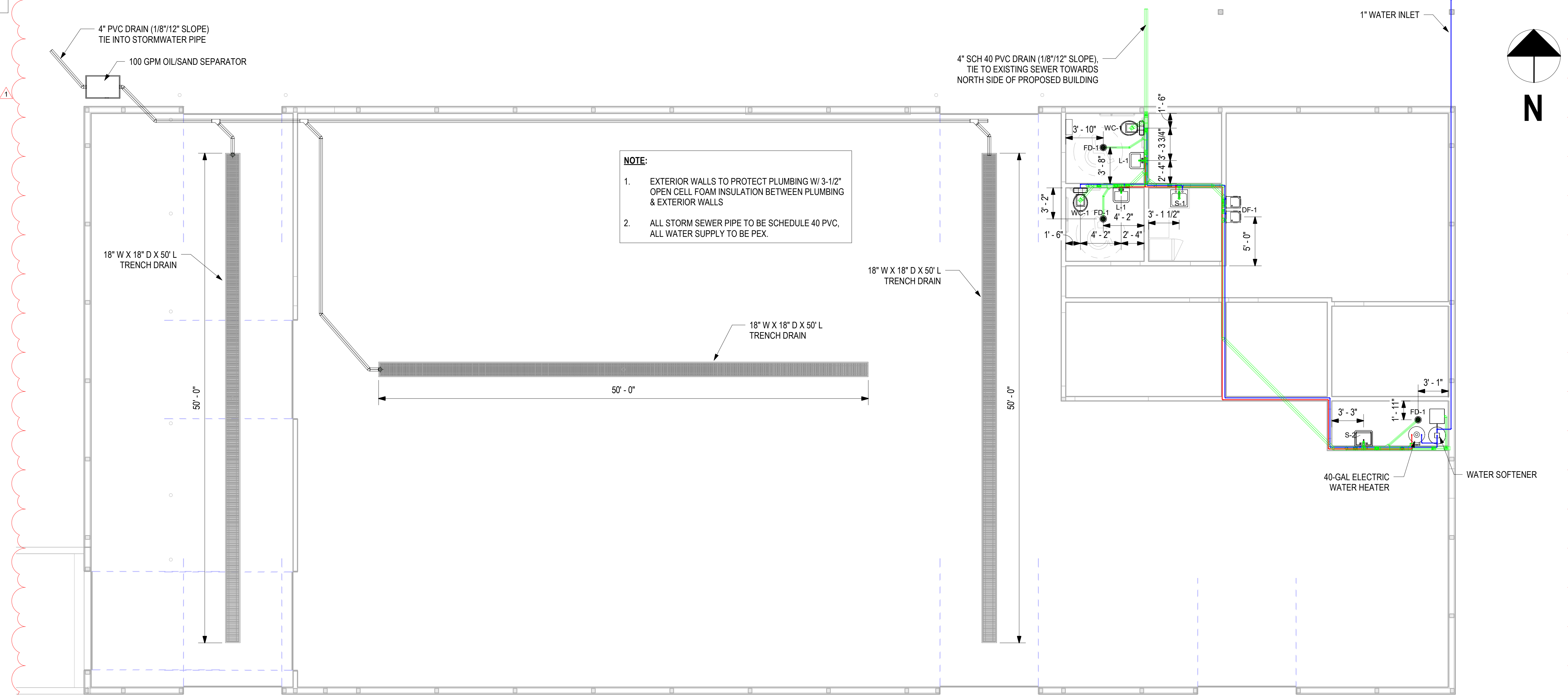
START DATE: 06/03/25

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PAGE NUMBER:



1 PLUMBING PLAN
3/16" = 1'-0"

PLUMBING FIXTURE SCHEDULE								
TYPE MARK	FIXTURE	DESCRIPTION	MANUFACTURER / MODEL	SAN/WASTE	VENT	COLD WATER	HOT WATER	REMARKS
L-1	LAVATORY	- BOWL - WALL HUNG, VITREOUS CHINA. - FAUCET - 4" CENTERSET FAUCET SHALL BE CAST BRASS CONSTRUCTION WITH ALL BRASS SHANK NUTS AND COUPLING NUTS. VANDAL RESISTANT WRIST-BLADE HANDLES, 0.5 GPM AERATOR, 14 TURN WASHERLESS CERAMIC DISC VALVE CARTIRIDGES. - SUPPLIES AND STOPS - LOOSE KEY ANGLE STOPS, 3/8" IPS CHROME PLATED INLET, 3/8" O.D. FLEXIBLE STEEL RISERS, WALL ESCUTCHEON. - TRAP 1-1/4" x 1-1/2" CAST BRASS, CHROME PLATED, WITH ADJUSTABLE GLEANOUT PLUG, TUBING TO WALL AND ESCUTCHEON. - DRAINS: -LAVATORY DRAIN OUTLET FITTING WITH PERFORATED GRID, CHROME PLATED FINISH AND CAST BRASS BODY.	- SINK - AMERICAN STANDARD "DECORUM" MODEL 9024004EC.020 - FAUCET - AMERICAN STANDARD "MONTERREY" MODEL 6055.205 - SUPPLIES AND STOPS - WOLVERINE BRASS INC. MODEL ENCORE; T&S BRASS - TRAP - WOLVERINE BRASS INC.; T&S BRASS	1-1/4"	2"	1/2"	1/2"	MOUNT TO MEET ADA REQUIREMENTS
S-1	KITCHEN SINK	- SINK - 33"x22", DUAL MOUNT, STAINLESS STEEL, 3-HOLE, DOUBLE BOWL - FAUCET - 8" CENTERSET FAUCET SHALL BE CAST BRASS CONSTRUCTION WITH ALL BRASS SHANK NUTS AND COUPLING NUTS. VANDAL RESISTANT WRIST-BLADE HANDLES, 1.5 GPM AERATOR, 14 TURN WASHERLESS CERAMIC DISC VALVE CARTIRIDGES. - SUPPLIES AND STOPS - LOOSE KEY ANGLE STOPS, 3/8" IPS CHROME PLATED INLET, 3/8" O.D. FLEXIBLE STEEL RISERS, WALL ESCUTCHEON. - TRAP 1-1/4" x 1-1/2" CAST BRASS, CHROME PLATED, WITH ADJUSTABLE GLEANOUT PLUG, TUBING TO WALL AND ESCUTCHEON. - DRAINS - X" WASTE DRAIN VALVE W/ TWIST HANDLE CHROME PLATED FINISH AND CAST BRASS BODY.	- SINK - AMERICAN STANDARD "COLONY" MODEL 22DB.6332283S.075 - FAUCET - AMERICAN STANDARD "MONTERREY" MODEL 6409170.002 - SUPPLIES AND STOPS - WOLVERINE BRASS INC. MODEL ENCORE; T&S BRASS - TRAP - WOLVERINE BRASS INC.; T&S BRASS - DRAIN - KINGSTON BRASS MODEL NO KBS1001	1-1/2"	2"	1/2"	1/2"	
S-2	UTILITY SINK	17" WALL MOUNTED SINGLE BASIN STAINLESS STEEL UTILITY SINK W/ 1.5 GPM KITCHEN FAUCET AND BASKET STRAINER	SINK - ELKAY MODEL NO. SEHS-17X	1-1/2"	2"	1/2"	1/2"	
WC-1	WATER CLOSET	- BOWL - VITREOUS CHINA, WHITE, ELONGATED, SIPHON JET, WALL HUNG, 1-1/2" TOP SPUD, LOW WATER CONSUMPTION (1.6 GPF/6.0 LPF). - FLUSH VALVE - QUIET EXPOSED, DIAPHRAGM TYPE, CHROME PLATED FLUSHOMETER WITH METAL OSCILLATING NON-HOLD-OPEN HANDLE, 1" I.P.S. SCREWORIVER BACK-CHECK ANGLE STOP, VANDAL RESISTANT STOP CAP, ADJUSTABLE TAILPIECE, VACUUM BREAKER FLUSH CONNECTION, SPUD COUPLING, WALL AND SPUD FLANGES FOR 1-1/2" TOP SPUD. - SEAT - WHITE HIGH IMPACT, EXTRA HEAVY SOLID PLASTIC, OPEN FRONT, ELONGATED, CHEMICAL RESISTANT. (LESS COVER), MODEL-IN SURFACE CHECK AND STAINLESS STEEL HINGE POSTS. CARRIER - BOLTED TYPE CLOSET FITTING, ADJUSTABLE SHORT FOOT WITH BEARING PLATE, SIZE AND TYPE AS REQUIRED.	- BOWL - AMERICAN STANDARD "MADERA FLOWISE" MODEL NO. 2234.001; KOHLER; CRANE; MANSFIELD; BRIGGS - FLUSH VALVE - AMERICAN STANDARD "LESS EVERCLEAN" MODEL 6047.121 LOW CONSUMPTION (1.28GPF/6.0 LPF); DELANY; SLOAN. - SEAT - BEMIS "ELONGATED OPEN FRONT" MODEL 1955CT; JAY R. SMITH; BENEKE; CENTOCO; SPERGEL. - CARRIER - JAY R. SMITH; ZURN; WADE; JOSAM	4"	2"	1"	--	HARDLINE BEFORE MANIFOLD
DF-1	DRINKING FOUNTAIN	DRINKING FOUNTAIN - WALL MOUNTED, BI-LEVEL, NON-FILTERED, REFRIGERATED, STAINLESS STEEL, FOR INDOOR APPLICATIONS	DRINKING FOUNTAIN - ELKAY MODEL EZSTL8SC	2"	2"	3/8"	--	MOUNT TO MEET ADA REQUIREMENTS

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03/11/2026

PROJECT LOCATION:
WEST TYSON ROAD
PORTLAND, IN 47371

PROJECT NAME:
60' X 140' RECYCLING
FACILITY DESIGN (IN)

DRAWING TITLE:
PLUMBING PLAN

REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	1/15/26	ADDED MECHANICAL & PLUMBING PLANS	HN

JOB NUMBER:
25,484.071

DRAWN BY: HN	ENGINEERED BY: HN
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START DATE: 06/03/25

PROGRESS DATE:

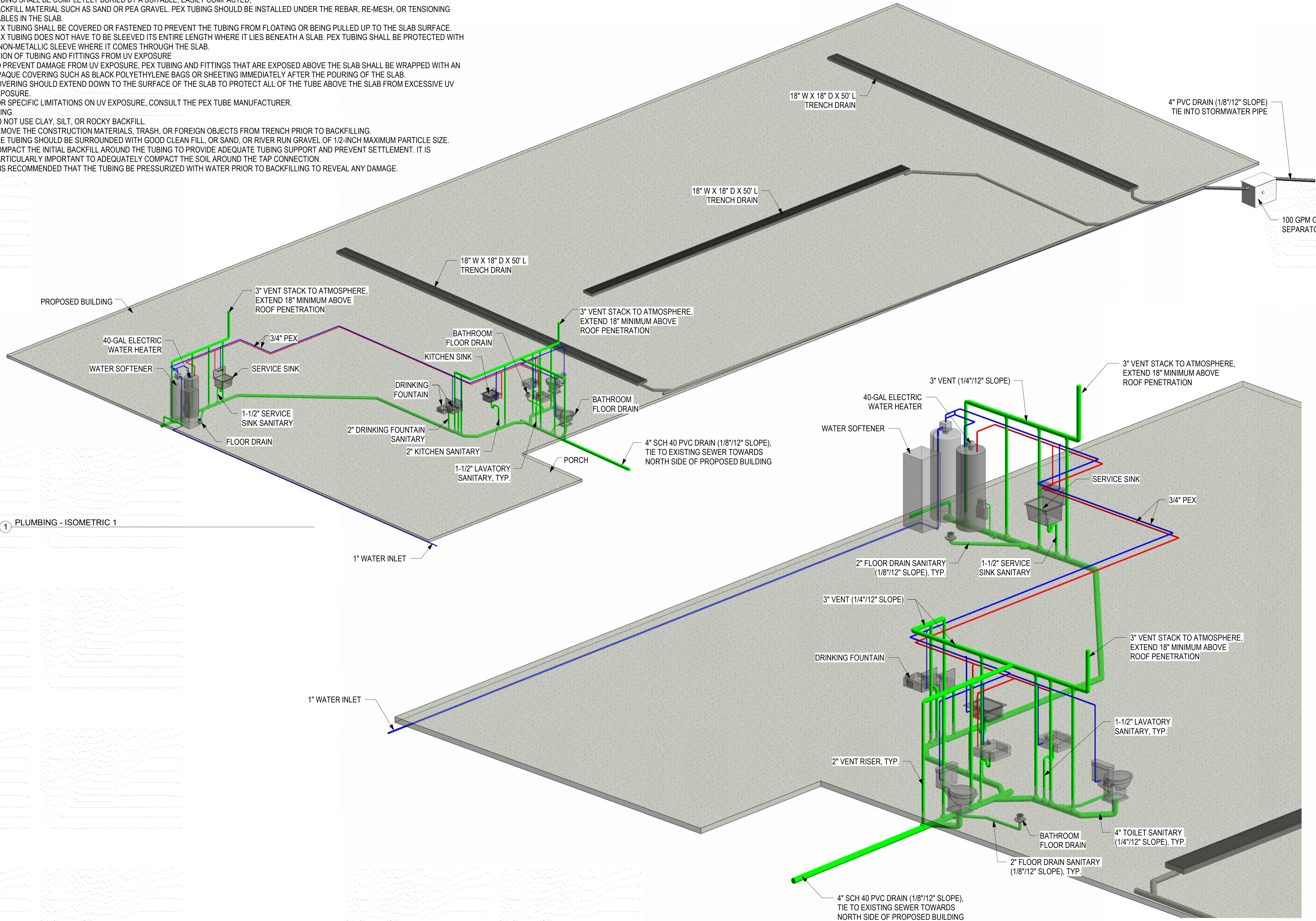
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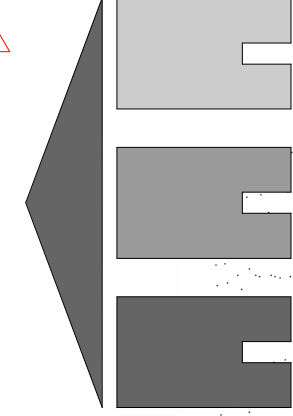
SCALE: 3/16" = 1'-0"

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PEX TUBING NOTES:

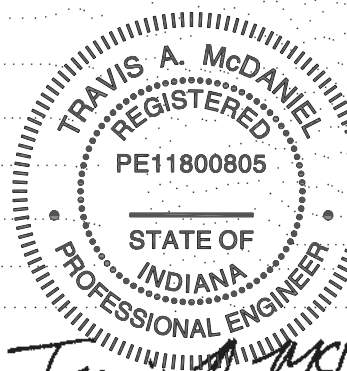
1. LAYING AND SUPPORTING TUBING UNDER SLAB
- A. ONLY CONTINUOUSLY-RUN LENGTHS OF TUBING WITHOUT FITTINGS SHALL BE USED WHEN INSTALLING PEX UNDER A SLAB.
- B. ALL CONNECTIONS SHALL BE OUTSIDE OR ABOVE THE SLAB.
- C. TUBING SHALL BE COMPLETELY BURIED BY A SUITABLE, EASILY COMPACTED.
- D. BACKFILL MATERIAL SUCH AS SAND OR PEA GRAVEL. PEX TUBING SHOULD BE INSTALLED UNDER THE REBAR, RE-MESH, OR TENSIONING CABLES IN THE SLAB.
- E. PEX TUBING SHALL BE COVERED OR FASTENED TO PREVENT THE TUBING FROM FLOATING OR BEING PULLED UP TO THE SLAB SURFACE.
- F. PEX TUBING DOES NOT HAVE TO BE SLEEVED ITS ENTIRE LENGTH WHERE IT LIES BENEATH A SLAB. PEX TUBING SHALL BE PROTECTED WITH A NON-METALLIC SLEEVE WHERE IT COMES THROUGH THE SLAB.
2. PROTECTION OF TUBING AND FITTINGS FROM UV EXPOSURE
- A. TO PREVENT DAMAGE FROM UV EXPOSURE, PEX TUBING AND FITTINGS THAT ARE EXPOSED ABOVE THE SLAB SHALL BE WRAPPED WITH AN OPAQUE COVERING SUCH AS BLACK POLYETHYLENE BAGS OR SHEETING IMMEDIATELY AFTER THE POURING OF THE SLAB.
- B. COVERING SHOULD EXTEND DOWN TO THE SURFACE OF THE SLAB TO PROTECT ALL OF THE TUBE ABOVE THE SLAB FROM EXCESSIVE UV EXPOSURE.
- C. FOR SPECIFIC LIMITATIONS ON UV EXPOSURE, CONSULT THE PEX TUBE MANUFACTURER.
3. BACKFILLING
- A. DO NOT USE CLAY, SILT, OR ROCKY BACKFILL.
- B. REMOVE THE CONSTRUCTION MATERIALS, TRASH, OR FOREIGN OBJECTS FROM TRENCH PRIOR TO BACKFILLING.
- C. THE TUBING SHOULD BE SURROUNDED WITH GOOD CLEAN FILL, OR SAND, OR RIVER RUN GRAVEL OF 1/2-INCH MAXIMUM PARTICLE SIZE.
- D. COMPACT THE INITIAL BACKFILL AROUND THE TUBING TO PROVIDE ADEQUATE TUBING SUPPORT AND PREVENT SETTLEMENT. IT IS PARTICULARLY IMPORTANT TO ADEQUATELY COMPACT THE SOIL AROUND THE TAP CONNECTION.
- E. IT IS RECOMMENDED THAT THE TUBING BE PRESSURIZED WITH WATER PRIOR TO BACKFILLING TO REVEAL ANY DAMAGE.





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03/11/2026

PROJECT LOCATION: WEST TYSON ROAD PORTLAND, IN 47371			
PROJECT NAME: 60' X 140' RECYCLING FACILITY DESIGN (IN)	DRAWING TITLE: PLUMBING ISOMETRIC		
	REVISIONS:		
NO.	DATE	DESCRIPTION	BY
1	1/15/26	ADDED MECHANICAL & PLUMBING PLANS	HN

JOB NUMBER: 25,484.071	
DRAWN BY: HN	ENGINEERED BY: HN
START DATE: 06/03/25	
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CERTIFIED DATE: 03/11/26	
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PAGE NUMBER:	
P02 OF P02 SHEETS	REV. 1

