

WAYNE STATE UNIVERSITY

PARKING STRUCTURE #1 - 2014 DEFERRED MAINTENANCE & IMPROVEMENTS - REBID

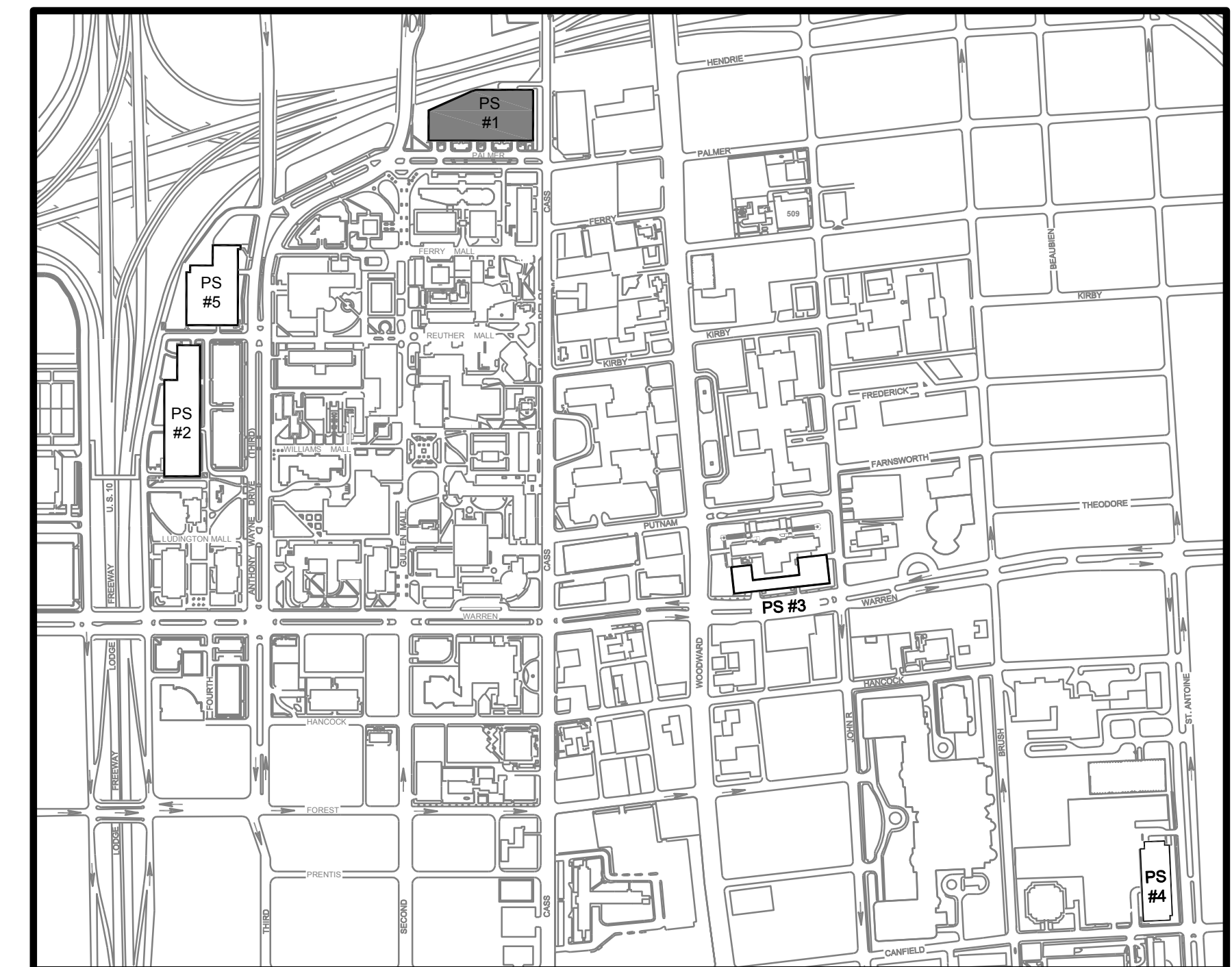
WSU PROJECT No. : PARKING STRUCTURE #1 - 051-243090

DETROIT, MICHIGAN

BIDDING AND CONSTRUCTION - 03/31/14 (REBID)

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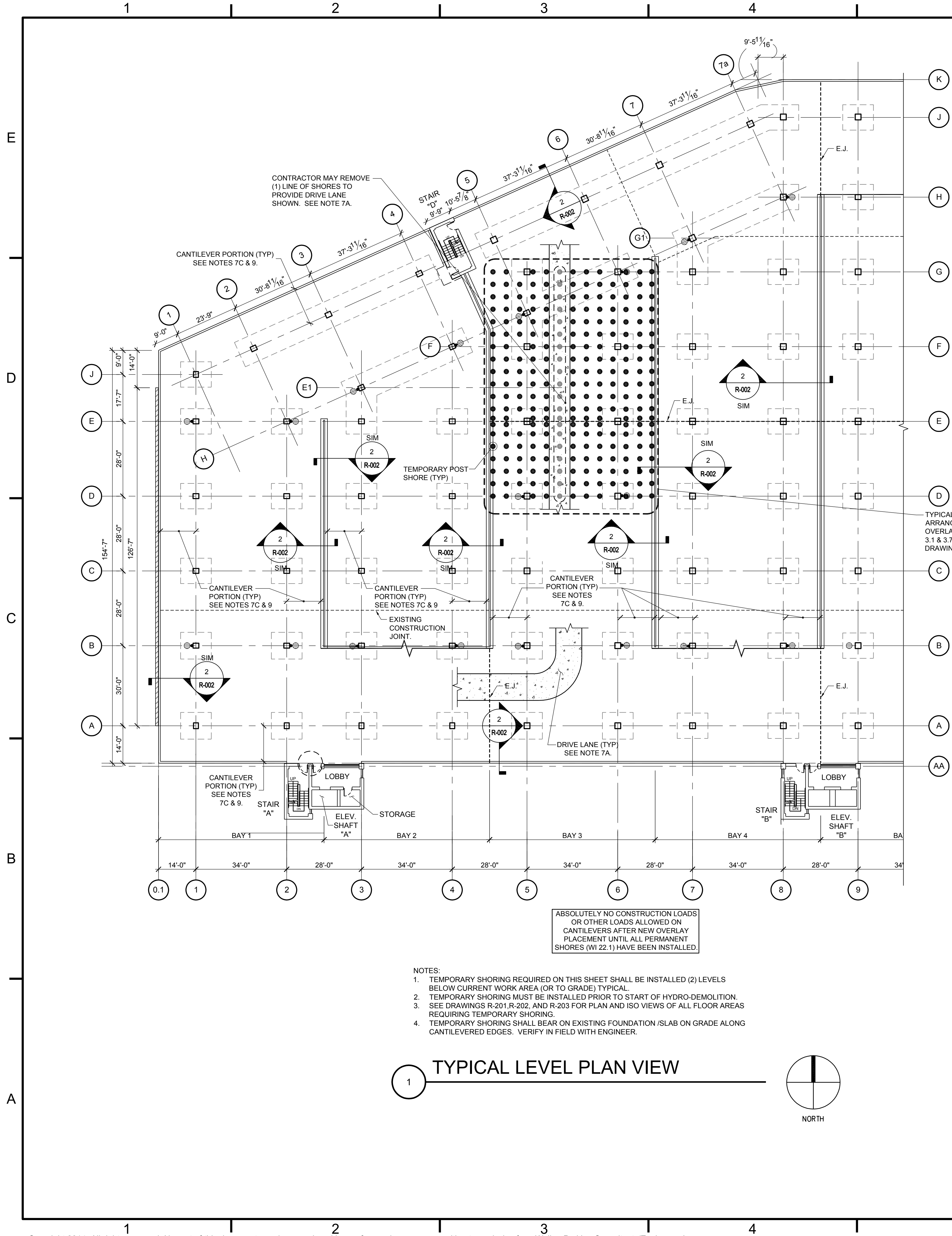
SITE PLAN



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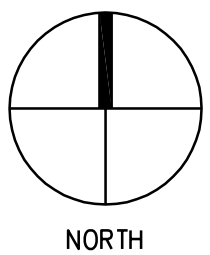
R-001

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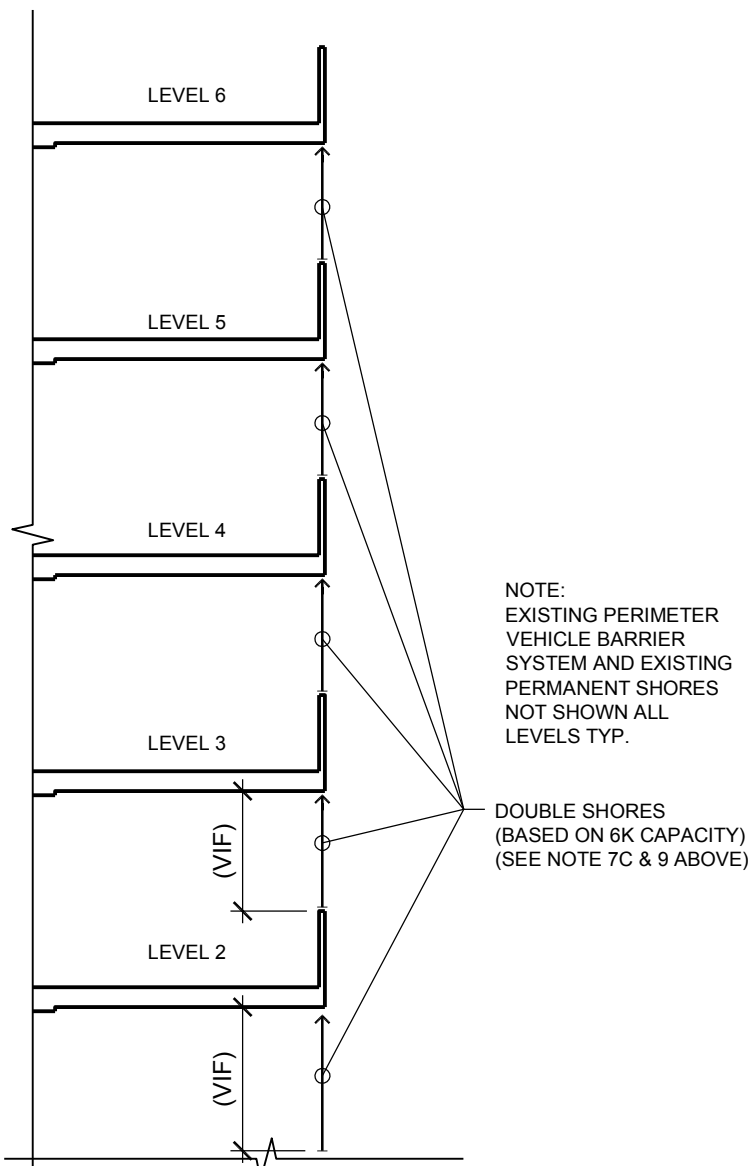


- NOTES:
1. TEMPORARY SHORING REQUIRED ON THIS SHEET SHALL BE INSTALLED (2) LEVELS BELOW CURRENT WORK AREA (OR TO GRADE) TYPICAL.
 2. TEMPORARY SHORING MUST BE INSTALLED PRIOR TO START OF HYDRO-DEMOLITION.
 3. SEE DRAWINGS R-201, R-202, AND R-203 FOR PLAN AND ISO VIEWS OF ALL FLOOR AREAS REQUIRING TEMPORARY SHORING.
 4. TEMPORARY SHORING SHALL BEAR ON EXISTING FOUNDATION /SLAB ON GRADE ALONG CANTILEVERED EDGES. VERIFY IN FIELD WITH ENGINEER.

1 TYPICAL LEVEL PLAN VIEW



- TEMPORARY SHORING/RESHORING NOTES:
1. INSTALL TEMPORARY SHORING/RESHORING PER W.I. 18.1 AND AS REQUIRED ON THIS SHEET. TYPICAL TEMPORARY SHORING/RESHORING LAYOUT PER W.I. 18.1 SHOWN ON THIS PLAN APPLIES TO ALL AREAS WHERE OVERLAY REPAIRS (W.I. 3.1), ARE TO BE PERFORMED AND ENTIRE BAYS WHERE OVERLAY STRIP PATCH REPAIRS (W.I. 3.7) ARE TO BE PERFORMED. SEE SHEETS R-201, R-202 AND R-203 FOR FLOOR AREAS REQUIRING TEMPORARY SHORING.
 2. RESHORING REQUIRED AT CANTILEVER EDGE (NOTE 7C) IS MINIMUM REQUIREMENTS AND IS BASED ON 25 PSF CONSTRUCTION LIVE LOAD AT ONE LEVEL AND TWO LEVELS OF DEAD LOAD.
 3. INTERIOR SHORING/RESHORING SHOWN IS MINIMUM REQUIREMENTS AND IS BASED ON 25 PSF CONSTRUCTION LIVE LOAD AT ONE LEVEL PLUS DEAD LOAD AT ONE LEVEL.
 4. ADDITIONAL SHORING/RESHORING REQUIRED AT CANTILEVERS AND INTERIORS TO SUPPORT EQUIPMENT, MATERIALS, FORMWORK, OR OTHER CONSTRUCTION LOADS SHALL BE INCLUDED IN THIS WORK. ADDITIONAL SHORING AT FULL DEPTH REPAIR AREAS OR OTHER AREAS AS DIRECTED BY ENGINEER TO COMPLETE W.I.'S 3.1 / 3.7 AND 3.8 AND ASSOCIATED WORK SHALL BE INCLUDED IN THIS WORK.
 5. REFER TO "TYPICAL WORK SEQUENCE NOTES FOR OVERLAY REPAIR" AND "WORK SCHEDULE" ON R-003A FOR COORDINATION OF WORK.
 6. MINIMUM SHORE CAPACITY SHALL BE 6,000 LB AT REQUIRED HEIGHT (TYP).
 7. TEMPORARY SHORES TO BE INSTALLED AS FOLLOWS:
 - a. 5'-0" O.C. EACH WAY (2) LEVELS BELOW CURRENT WORK AREA. CONTRACTOR MAY PROVIDE (1) 10' WIDE DRIVE LANE BY REMOVING (1) LINE OF SHORES AND PROVIDING ADDITIONAL SHORING AND HEADER BEAMS AS REQUIRED TO SUPPORT ALL LOADS ABOVE. DRIVE LANE (IF USED) TO BE LOCATED BY CONTRACTOR.
 - b. 5'-0" O.C. ALONG MID-SPAN OF CANTILEVERS (2) LEVELS BELOW CURRENT WORK AREA.
 - c. INSTALL DOUBLE SHORES AT 5'-0" O.C. ALONG OUTSIDE EDGE OF CANTILEVERS BELOW CURRENT WORK AREA TO GRADE LEVEL. SEE NOTE 9b BELOW.
 - d. SHORES ON CONSECUTIVE LEVELS SHALL BE PLUMB AND CONCENTRICALLY LOCATED WITH SHORES ABOVE AND BELOW.
 8. DO NOT REMOVE SHORES BEFORE THE GREATER OF (1) WEEK OR 80% OF 28-DAY CONCRETE DESIGN COMPRESSIVE STRENGTH IS ACHIEVED. DO NOT REMOVE SHORES ALONG CANTILEVER EDGE PER NOTE 9b BELOW.
 9. RESHORES AT CANTILEVER EDGES:
 - a. TEMPORARY SHORES PER NOTE 7C ABOVE SHALL SERVE AS RESHORES.
 - b. MAINTAIN RESHORES ALONG CANTILEVERED EDGES UNTIL PERMANENT SHORING IS INSTALLED AND GROUTED. NO EXCEPTIONS.
 - c. RESHORES DESIGNED TO CARRY 25 PSF CONSTRUCTION LIVE LOAD AND DEAD LOAD AT LEVEL BEING WORKED ON, PLUS DEAD LOAD OF LEVEL ABOVE.
 - d. NO CONSTRUCTION LOAD OR OTHER LIVE LOADS PERMITTED IN CANTILEVER PORTION OF SLAB UNTIL PERMANENT SHORING INSTALLATION IS COMPLETED.
 10. CONTRACTOR SHALL SUBMIT SHORING/RESHORING DESIGN SEALED BY A PROFESSIONAL ENGINEER LICENSED IN MICHIGAN THAT COMPLIES WITH PERFORMANCE REQUIREMENTS ON THIS DRAWING AND THE SPECIFICATIONS.
 11. INSTALL SHORES TIGHT TO FLOOR AND CEILING, AND SECURE AT TOP AND BOTTOM TO MAINTAIN REQUIRED POSITIONING.
 12. REMOVE METAL JOINT COVERS ALONG STAIR/ELEVATOR TOWER (AS APPLICABLE) TO PROVIDE BEARING SURFACE ON CURB FOR SHORES. REMOVAL AND REPLACEMENT OF COVERS IS INCLUDED IN W.I. 18.1.



- NOTES:
1. MECHANICALLY SECURE SHORES TOP & BOTTOM
 2. THIS SECTION APPLIES TO ALL CANTILEVER EDGES WITHIN WORK AREAS (TYPICAL). ADJACENT BAY (AT INTERIOR CANTILEVERS) NOT SHOWN FOR CLARITY.

2 TEMPORARY SHORES/RESHORES AT CANTILEVER EDGES



WAYNE STATE UNIVERSITY
PARKING STRUCTURE #1 -
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& IMPROVEMENTS - REBID MICHIGAN
DETROIT

MARK	DATE	DESCRIPTION	ISSUE
REBID	03/31/14	BIDDING AND CONSTRUCTION	
	02/19/14		

PROJECT NO: 20-1433.00

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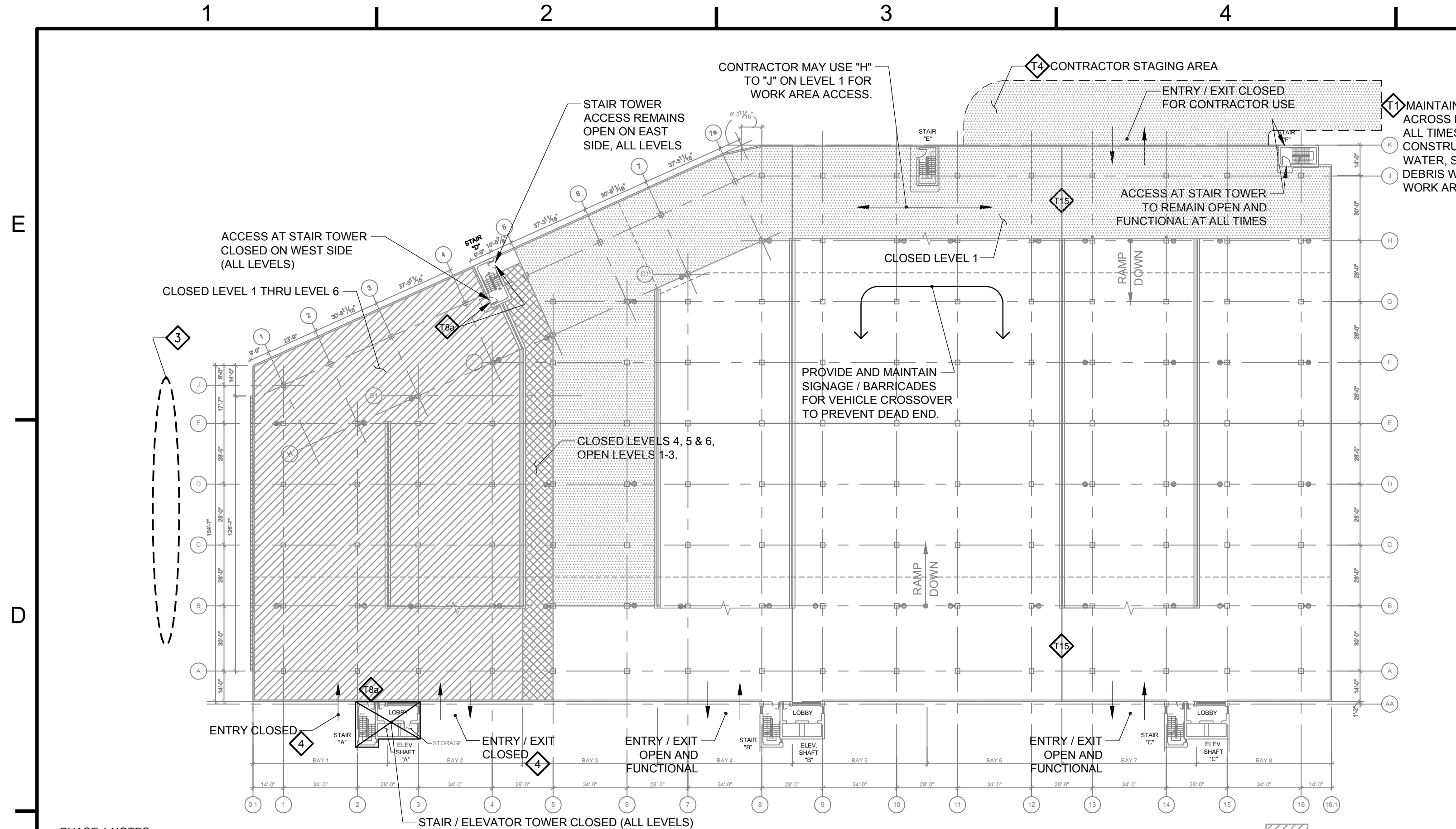
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SHEET TITLE:

TEMPORARY
SHORING
(W.I. 18.1)

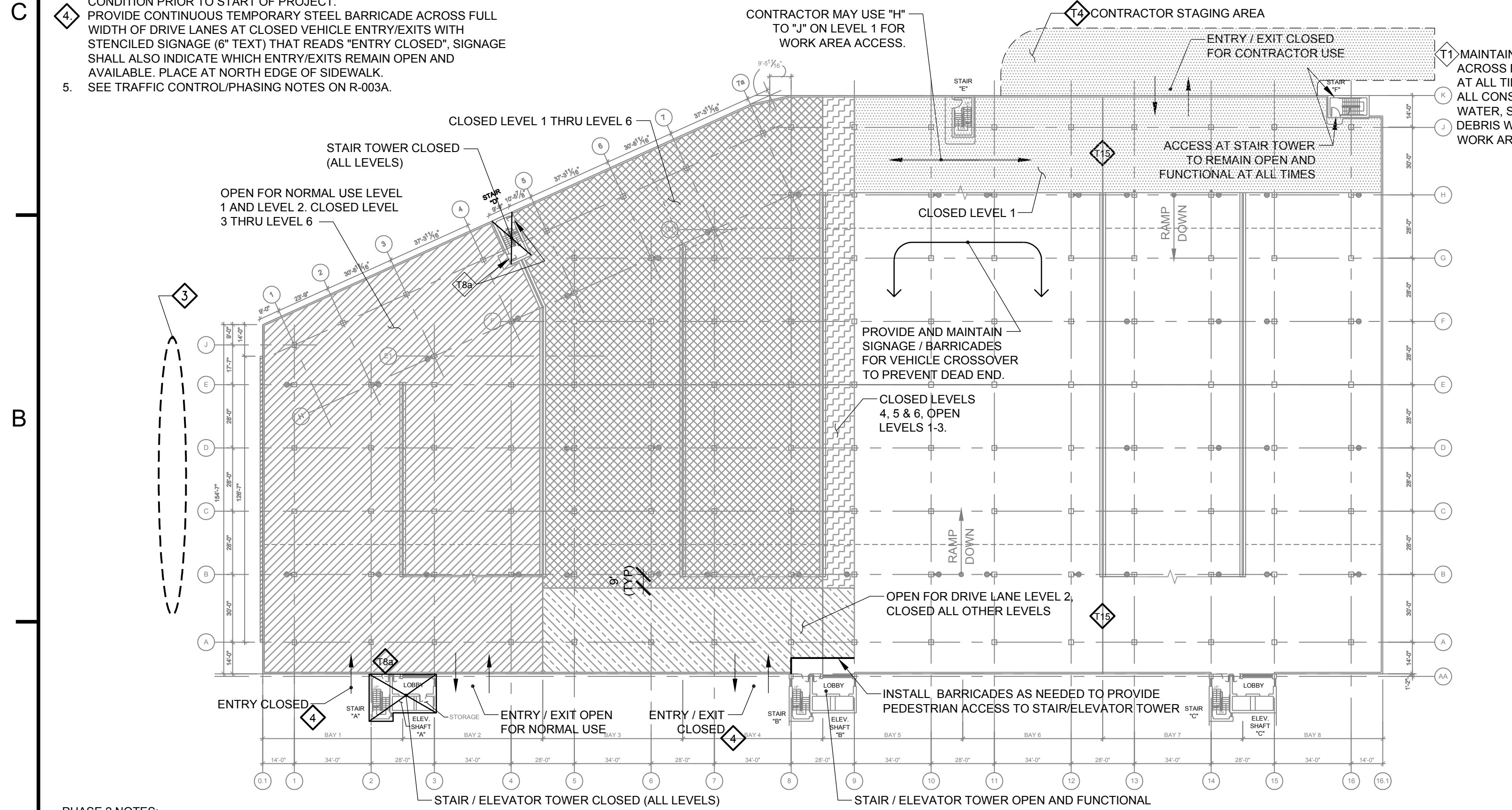
R-002

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- PHASE 1 NOTES:**
1. STAIR AND ELEVATOR TOWERS "B", "C", "E", & "F" TO BE MAINTAINED OPEN AND FUNCTIONAL AT ALL TIMES.
 2. PROVIDE BARRICADES TO PREVENT VEHICLE AND PEDESTRIAN ACCESS AROUND ALL WORK AREAS, CONTRACTOR STAGING / STORAGE AREAS, AND ACCESS ROUTES PER W.I. 1.6.
 3. LAWN AREA ON WEST SIDE OF STRUCTURE IS AVAILABLE AT CONTRACTOR'S OPTION FOR CONTRACTOR STAGING/STORAGE/ETC. IF UTILIZED, CONTRACTOR SHALL MAINTAIN PERIMETER FENCINGS WITH PRIVACY SCREENING (MIN 6' TALL) AT ALL TIMES. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES (LANDSCAPING, TREES, CURBS, SIDEWALKS, ETC.) CONTRACTOR SHALL REPAIR LAWN AREA TO CONDITION PRIOR TO START OF PROJECT.
 4. PROVIDE CONTINUOUS TEMPORARY STEEL BARRICADE ACROSS FULL WIDTH OF DRIVE LANES AT CLOSED VEHICLE ENTRY/EXITS WITH STENOILED SIGNAGE (6" TEXT) THAT READS "ENTRY CLOSED". SIGNAGE SHALL ALSO INDICATE WHICH ENTRY/EXITS REMAIN OPEN AND AVAILABLE. PLACE AT NORTH EDGE OF SIDEWALK.
 5. SEE TRAFFIC CONTROL/PHASING NOTES ON R-003A.

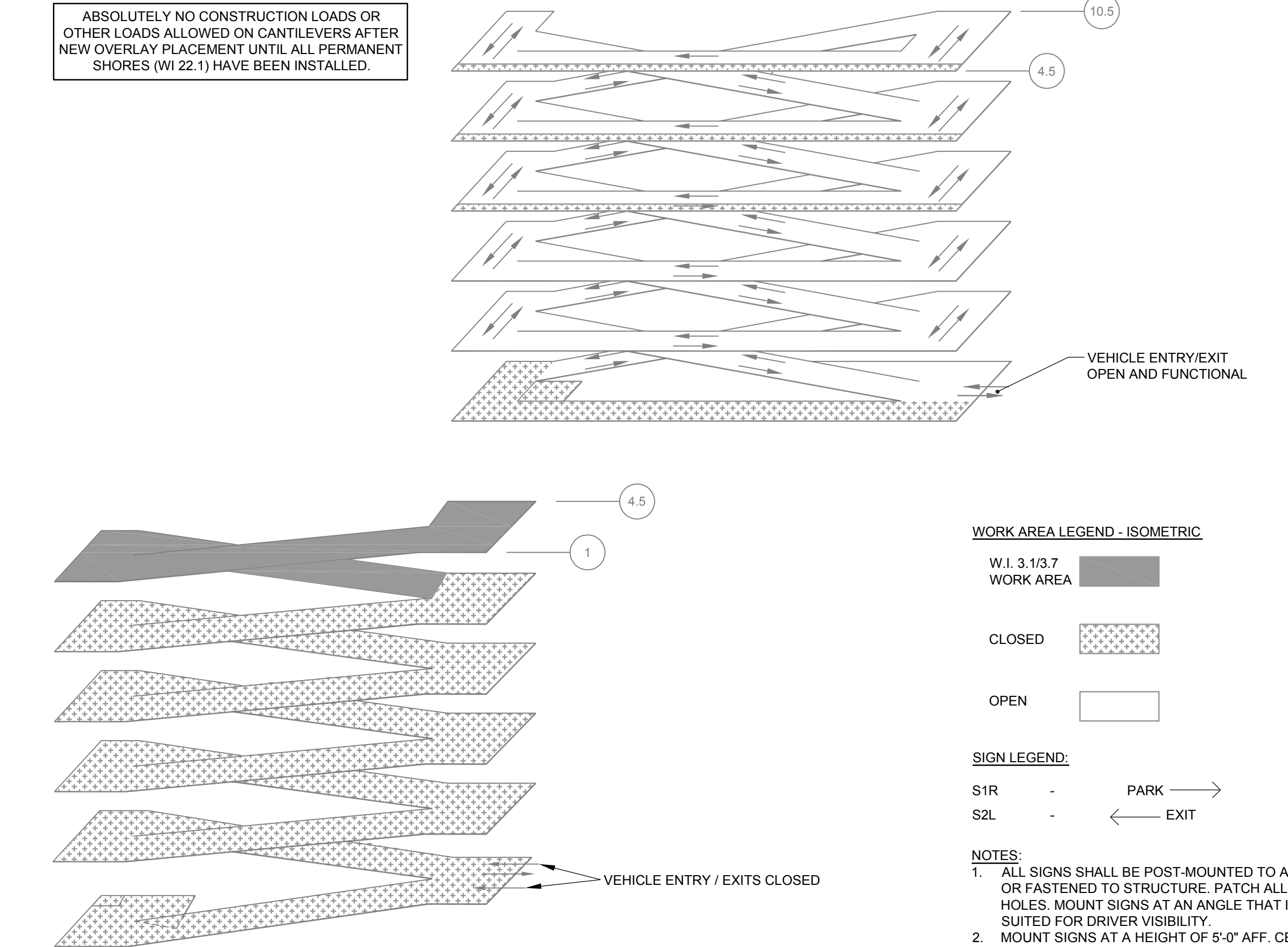
1 PHASE 1 - TYPICAL PLAN
(SEE WORK SCHEDULE ON R-003A)



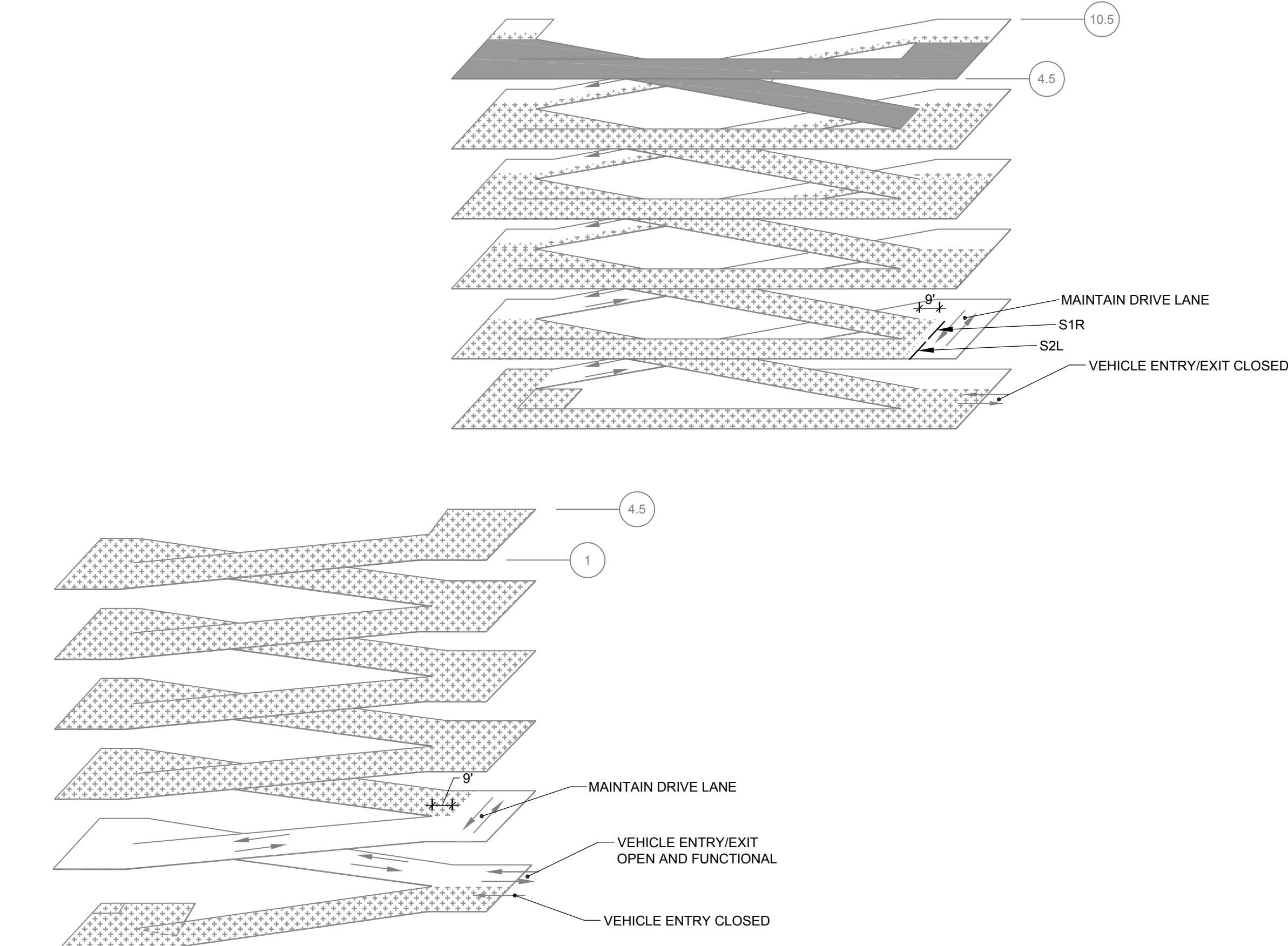
- PHASE 2 NOTES:**
1. SEE PHASE 1 NOTES.

3 PHASE 2 - TYPICAL PLAN
(SEE WORK SCHEDULE ON R-003A)

ABSOLUTELY NO CONSTRUCTION LOADS OR OTHER LOADS ALLOWED ON CANTILEVERS AFTER NEW OVERLAY PLACEMENT UNTIL ALL PERMANENT SHORES (WI 22.1) HAVE BEEN INSTALLED.



2 PHASE 1 - ISOMETRIC
(SEE WORK SCHEDULE ON R-003A)



4 PHASE 2 - ISOMETRIC
(SEE WORK SCHEDULE ON R-003A)



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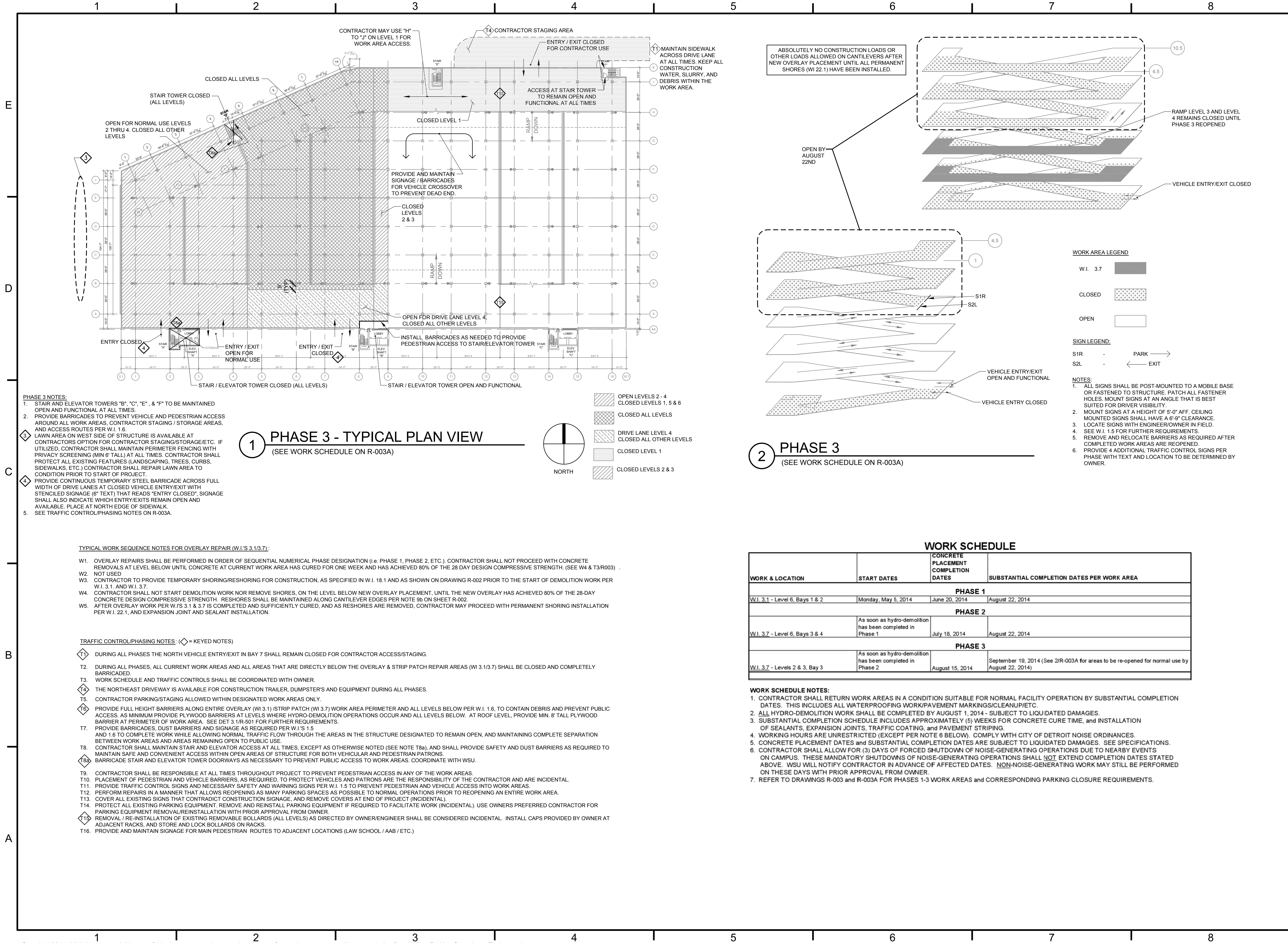
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REBID	03/31/14	BIDDING AND CONSTRUCTION	

PROJECT NO: 20-1433.00
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SHEET TITLE:
TRAFFIC CONTROL & PHASING

R-003

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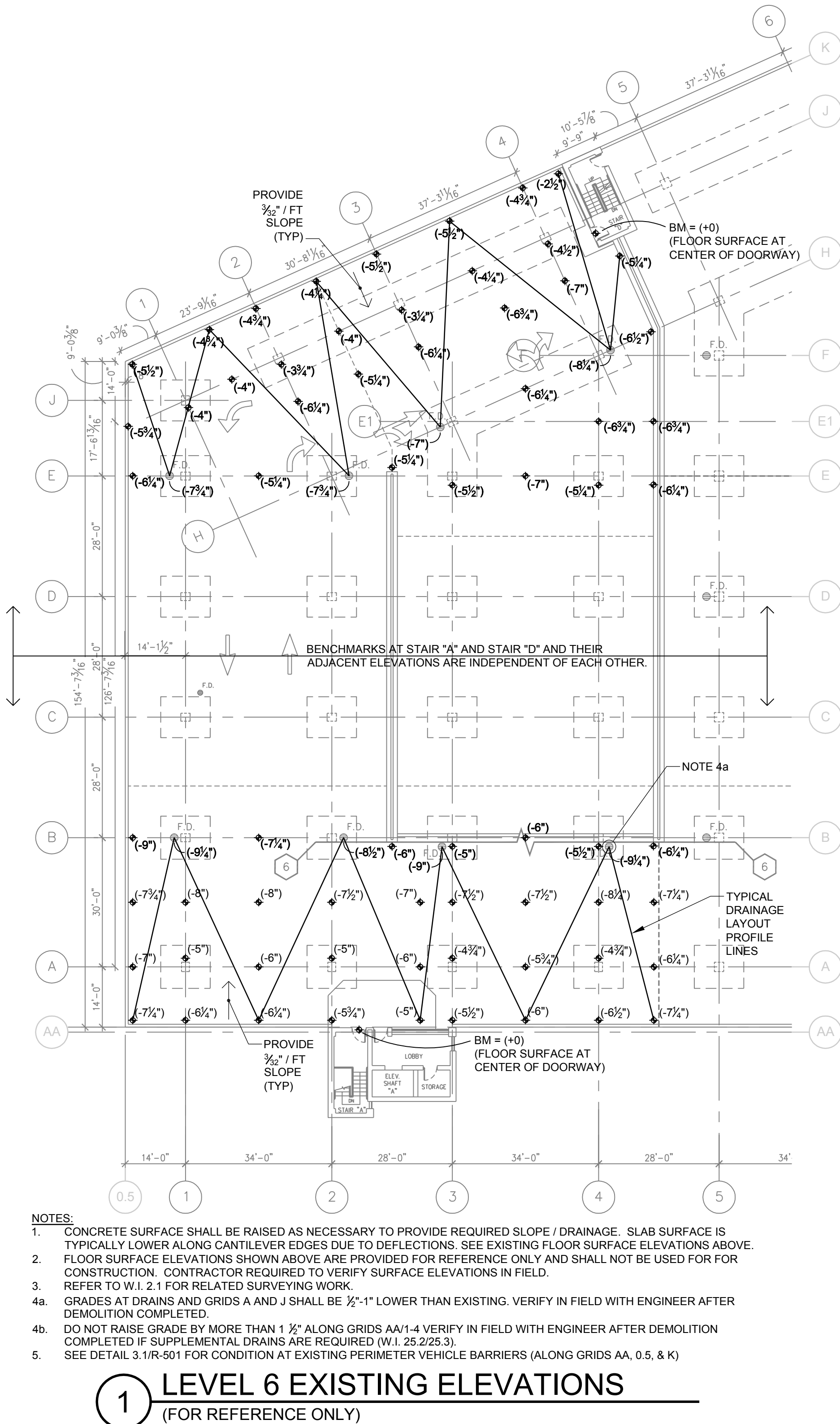
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R-003A

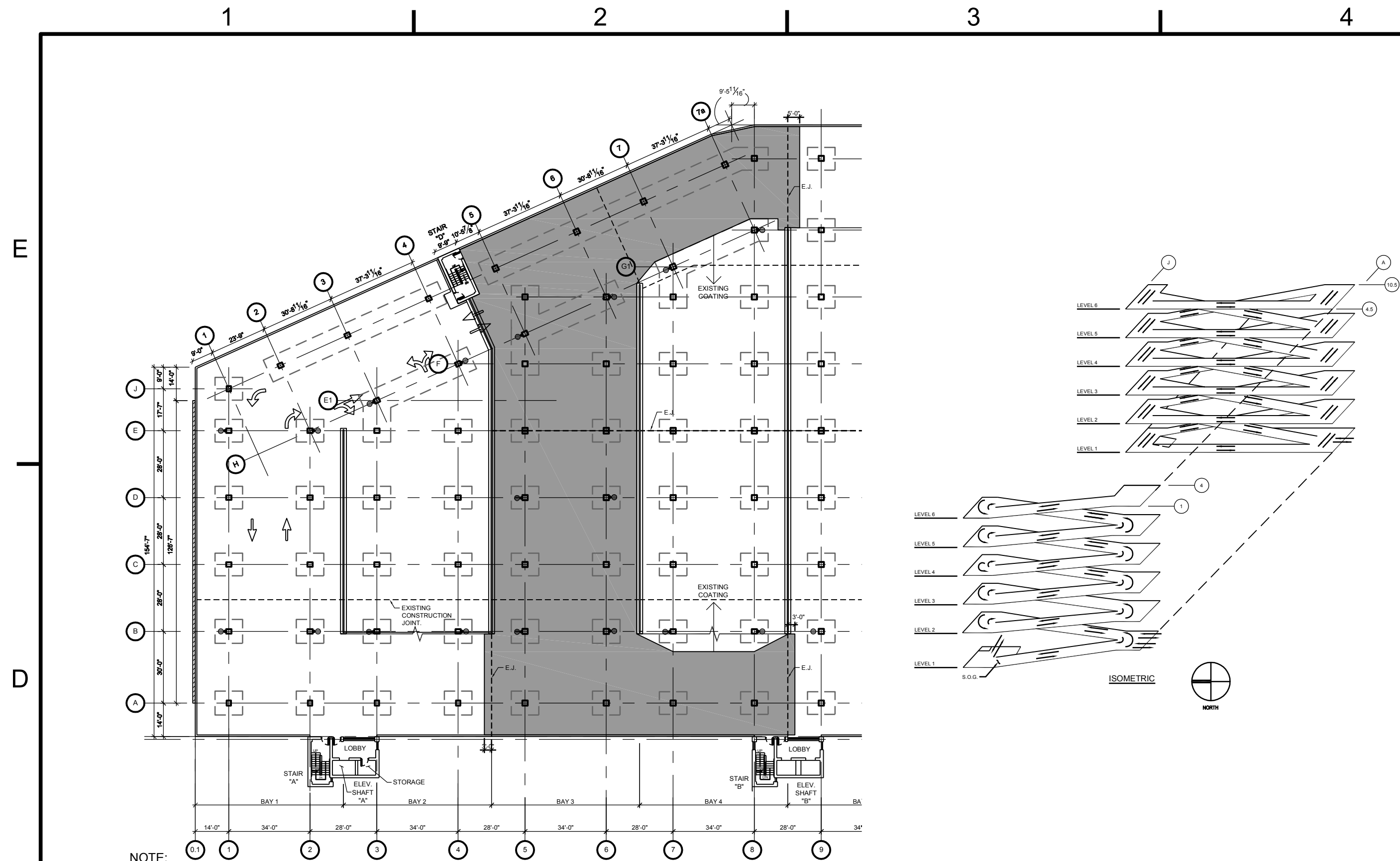
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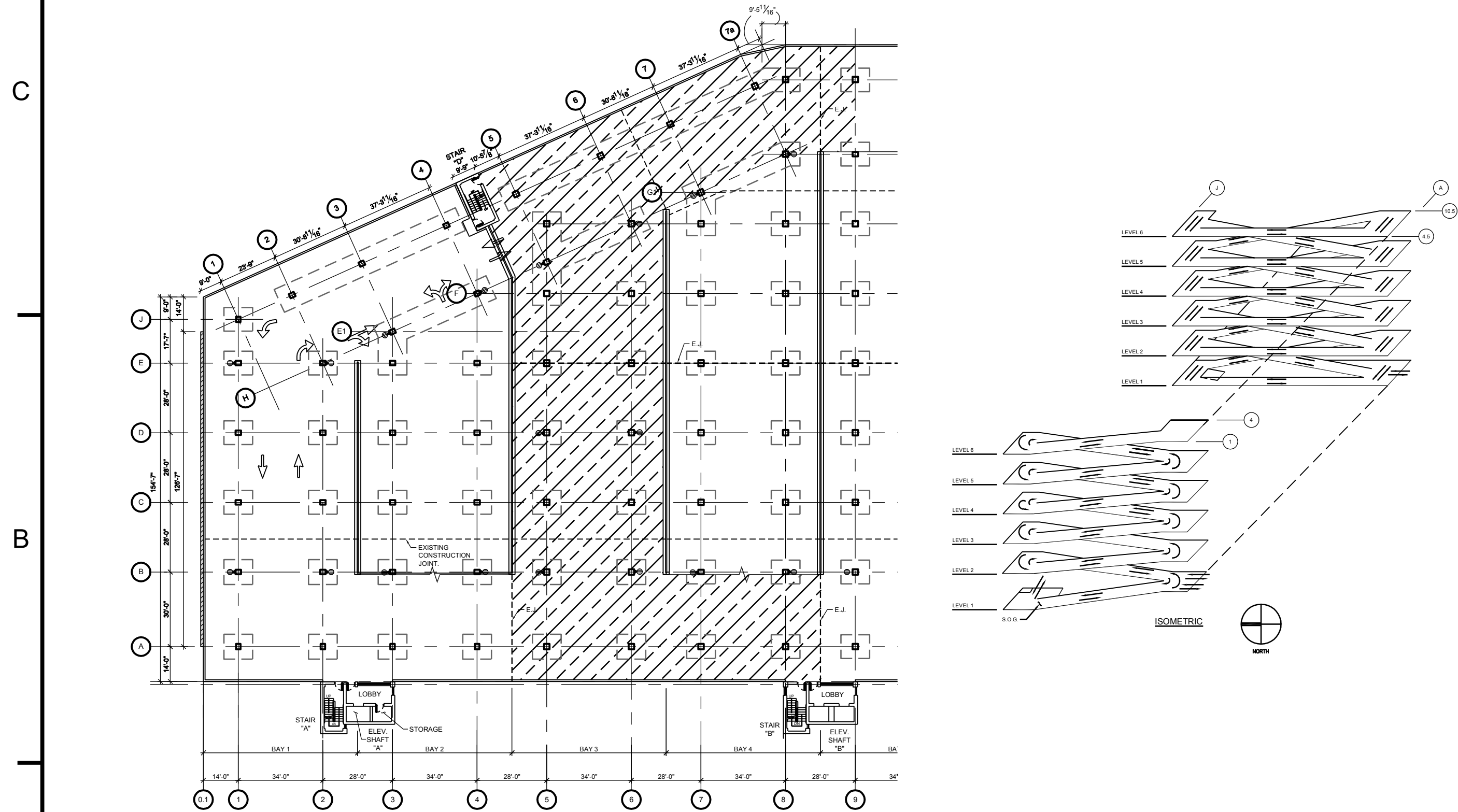
E
D
C
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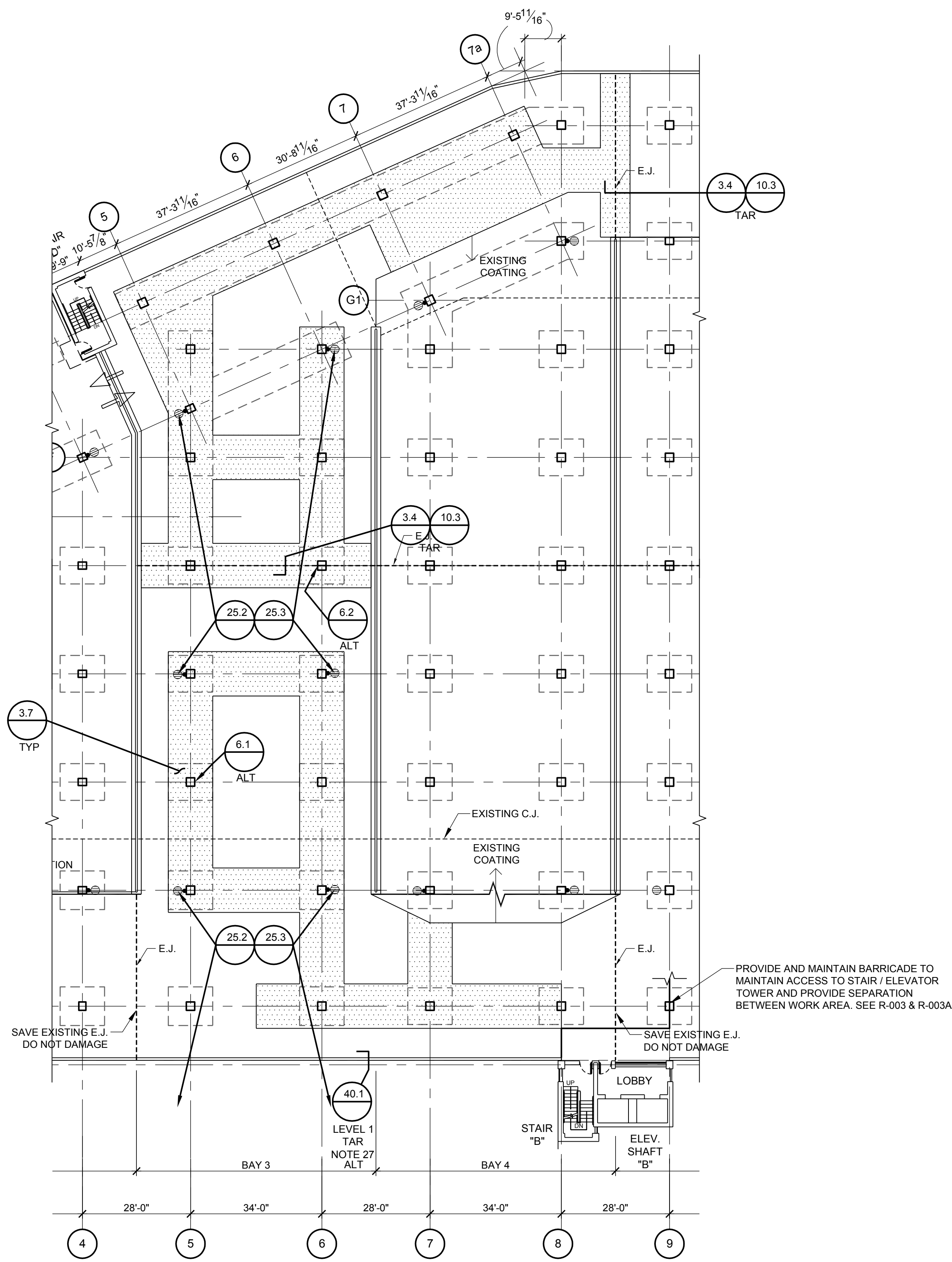
3 LEVEL 2 - ALTERNATE AREA OF TRAFFIC TOPPING INSTALLATION
(W.I. 16.1A) (ALTERNATE)



2 LEVEL 2 - FLOOR AREAS REQUIRING TEMPORARY SHORING PER W.I. 18.1
(TEMPORARY SHORING REQUIRED BELOW ENTIRE CROSS-HATCHED AREA TO GRADE)

SHEET NOTES:

- SEE SHEETS R-001 THRU R-003A FOR GENERAL NOTES, LEGEND, TRAFFIC CONTROL AND PHASING, WORK SCHEDULE, AND TEMPORARY SHORING REQUIREMENTS PER W.I. 18.1 FOR OVERLAY REPAIRS (W.I. 3.1 / 3.7).
- REPLACE CONCRETE SLAB ALONG EXPANSION JOINT PER W.I. 3.4 WHERE DELAMINATIONS/SPALLS OCCUR AT SLAB TOP AND BOTTOM IN OVERLAY REPAIR AREAS (W.I. 3.1 / 3.7). PROVIDE BLOCKOUT FOR E.J. PER DETAIL 3.1.2.
- APPLY NEW TRAFFIC MARKINGS IN BAYS 1-4 ON LEVELS 1-6 PER W.I. 45.1 AFTER ALL OTHER REPAIRS ARE COMPLETED TO REPLACE AND MATCH THE EXISTING TRAFFIC MARKINGS. ALSO INCLUDE ALL OTHER AREAS IN STRUCTURE WHERE MARKINGS ARE AFFECTED BY PROJECT. SEE SECTION 020010.
- REPAIR CURBS PER W.I. 3.5 PRIOR TO INSTALLING PERMANENT SHORES (W.I. 22.1). SEE R-203 FOR LOCATIONS OF NEW SHORES.
- REPRESENTATIVE CONCRETE REPAIR LOCATIONS SHOWN (W.I. 3.2, 3.4, 3.6, 3.7, 3.12, 4.1, 6.1, 6.2). ACTUAL EXTENTS AND LOCATIONS TO BE MARKED BY CONTRACTOR IN FIELD AND REVIEWED BY ENGINEER. CONTRACTOR TO COORDINATE.
- INSTALL PROTECTION FOR ELEVATOR TOWERS (DUST / DEBRIS / WATER PROTECTION, SMOKE ALARM PROTECTION, ETC.) PRIOR TO START OF HYDRO-DEMOLITION TO ENSURE ALL DEBRIS / SLURRY / WATER / DUST IS PREVENTED FROM ENTERING ELEVATOR TOWERS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEANING AND / OR REPAIR NECESSARY TO RESTORE ELEVATORS TO CLEAN / FUNCTIONAL CONDITION.
- AT COLUMNS, THE NEW OVERLAY SURFACE ELEVATION SHALL BE THE HIGHER OF EITHER THE NEW ELEVATION REQUIRED FOR MINIMUM SLOPE OR THE EXISTING ELEVATION. (SEE NOTE 25).
- TEMPORARY SHORING SHALL BE INSTALLED PER W.I. 18.1 AT HYDRO-DEMOLITION REPAIR AREAS PRIOR TO CONCRETE REMOVALS. REFER TO SHEET R-002.
- VARY OVERLAY THICKNESS LINEARLY ALONG REQUIRED DRAINAGE PROFILE LINES FROM HIGH POINTS TO DRAINS AS REQUIRED (TYP).
- PROVIDE CONTROL JOINTS IN NEW OVERLAY SURFACE ALONG GRID LINES AND AT EXISTING CONSTRUCTION JOINTS PER DETAIL 11.1 (INCIDENTAL TO W.I. 3.1 / 3.7). SEE TYPICAL LAYOUT, DETAIL 2/R-001.
- INSTALL COVE SEALANT AT ALL WALLS, COLUMNS, & CURBS IN OVERLAY REPAIR AREAS PER DETAIL 11.7 (INCIDENTAL TO W.I. 3.1 & 3.7).
- PROVIDE MINIMUM 7'-0" FLOOR TO CEILING CLEARANCE HEIGHT AT DROP PANELS AND MINIMUM 7'-4" BETWEEN DROP PANELS. ALSO PROVIDE 6'-8" MINIMUM CLEARANCE AT LIGHT FIXTURES AND SECURITY CAMERAS. CONTRACTOR SHALL VERIFY PRIOR TO PLACING CONCRETE AND NOTIFY ENGINEER OF ALL LOCATIONS NOT MEETING HEIGHT REQUIREMENTS, IF NECESSARY. RECESS LIGHT FIXTURES AND SECURITY CAMERAS PER W.I. 3.4.2 AND 4.3.
- MATCH EXISTING ELEVATIONS ALONG WORK AREA LIMITS (TYP) WHERE REQUIRED. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- COLLECT ALL HYDRO-DEMOLITION WATER. DO NOT ALLOW RUN OFF OUTSIDE WORK AREA LIMITS. FOLLOW ALL ENVIRONMENTAL REGULATIONS FOR DISCHARGE. SEE SPECIFICATION SECTION 025160 FOR FURTHER HYDRO-DEMOLITION REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL EXISTING FEATURES FOR DURATION OF PROJECT INCLUDING, BUT NOT LIMITED TO: LIGHT FIXTURES, SWITCHES, SECURITY CAMERAS, ELEVATORS, CONDUIT, SIGNAGE, DRAINS, PIPING, PERIMETER RAILINGS ETC. ANY CONTRACTOR CAUSED DAMAGE SHALL BE REPAIRED/REPLACED TO SATISFACTION OF OWNER AT NO ADDITIONAL COST TO OWNER. REFER TO SECTION 020010 FOR DESCRIPTION OF WORK THAT MAY OR MAY NOT BE APPLIED TO ME ALLOWANCE (W.I. 25.1).
- MAINTAIN EXISTING ADA COMPLIANT SLOPED SURFACES AT STAIR/ELEV DOORWAYS WITHIN OVERLAY REPAIR AREAS (INCIDENTAL TO W.I. 3.1 AND 3.7, AS APPLICABLE).
- NO LOADS ALLOWED ON CANTILEVERS AFTER CONCRETE PLACEMENT UNTIL DESIGN STRENGTH IS ACHIEVED AND ALL PERMANENT SHORING HAS BEEN INSTALLED (TYP).
- NEW FLOOR DRAIN ELEVATIONS SHALL BE SET AT OR BELOW EXISTING FLOOR DRAIN ELEVATIONS. LOWER DRAINS AS NECESSARY TO PROVIDE REQUIRED SLOPE AND SURFACE DRAINAGE, WHILE MAINTAINING 1/4" MINIMUM CONCRETE COVER. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- PRIOR TO AND DURING CONCRETE PLACEMENT, PROFESSIONAL LICENSED SURVEYOR PER W.I. 2.1 SHALL VERIFY ELEVATIONS AT ALL DRAINAGE PROFILE LINES, HALFWAY POINTS, AND TOP OF DRAINS PER W.I. 2.1 TO ENSURE PROPER DRAINAGE AND CLEARANCE HEIGHT.
- PROVIDE 1/4" PER FOOT MINIMUM SLOPE TO DRAINS, UNLESS NOTED OTHERWISE.
- INSTALL PROTECTION FOR FLOOR DRAINS (FILTERS AND OTHER MEANS OF PROTECTION AS NECESSARY) PRIOR TO START OF HYDRO-DEMOLITION TO ENSURE ALL DEBRIS/SLURRY IS PREVENTED FROM ENTERING EXISTING DRAINAGE SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEANING AND/OR REPAIR NECESSARY TO RESTORE DRAINAGE SYSTEM (DRAINS & PIPES) TO EXISTING FUNCTIONAL CONDITION.
- PERFORM CEILING REPAIRS PER W.I. 4.1 UPON COMPLETION OF HYDRO-DEMOLITION WORK. LOCATE IN FIELD WITH ENGINEER.
- RESTORE ALL LANDSCAPING FEATURES TO EXISTING CONDITION UPON COMPLETION OF REPAIRS (INCIDENTAL).
- VERIFY STATUS OF EXISTING SECURITY SYSTEM (IE: IDENTIFY ANY NON-FUNCTIONAL CAMERAS/COMPONENTS) PRIOR TO START OF HYDRO-DEMOLITION WORK. COORDINATE WITH OWNER. ANY NON-FUNCTIONAL LIGHT FIXTURES SHALL ALSO BE DOCUMENTED PRIOR TO START OF HYDRO-DEMOLITION. PERFORM SIMILAR REVIEW OF ALL ELEVATORS PRIOR TO START OF WORK.
- PROVIDE 1" HIGH x 3" WIDE CONCRETE WASH AROUND COLUMNS AND ALONG WALLS / CURBS (SEE 1/R-001). PLACE MONOLITHIC WITH OVERLAY (W.I. 3.1 & W.I. 3.7). VERIFY IN FIELD PRIOR TO PLACING CONCRETE.
- PERFORM MASONRY REPAIRS ON ROOF LEVEL AT STAIR 'A', STAIR 'D', AND ALONG WEST WALL PER W.I. 35.1-35.6 AS SHOWN ON R-203.
- ALTERNATE W.I. 40.1 (PERIMETER CAPSTONES) OCCURS AS NEEDED AT LOCALIZED AREAS ALONG THE ENTIRE PERIMETER OF LEVEL 1. LOCATE REPAIRS IN FIELD WITH ENGINEER.
- INSTALL LED LIGHTS PER W.I. 50.1 AT UNDERSIDE OF ALL OVERLAY REPAIR (W.I. 3.1/3.7) WORK AREAS. REFER TO SECTION 020010 FOR SPECIFIC REQUIREMENTS.



1 LEVEL 2 PLAN VIEW
SEE R-202 FOR LEGEND

MARK	DATE	DESCRIPTION	ISSUE
REBID	03/31/14	BIDDING AND CONSTRUCTION	
	02/19/14		

PROJECT NO: 20-1433.00

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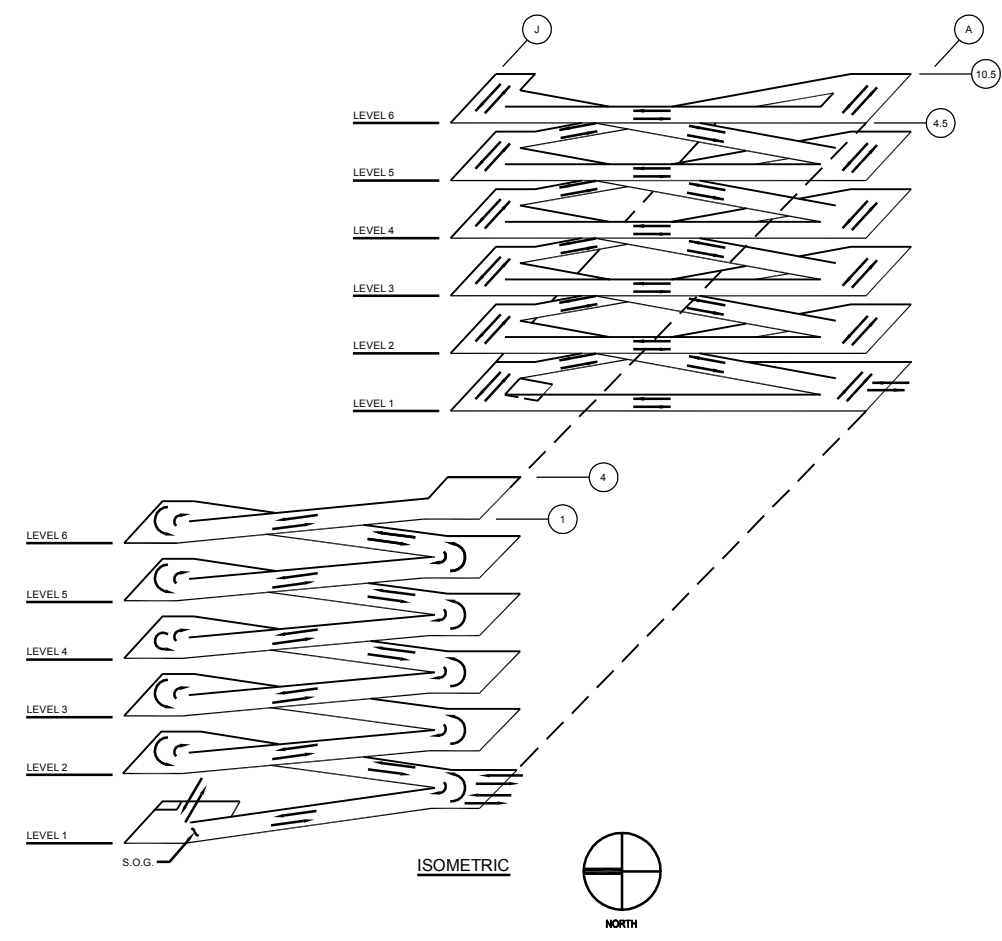
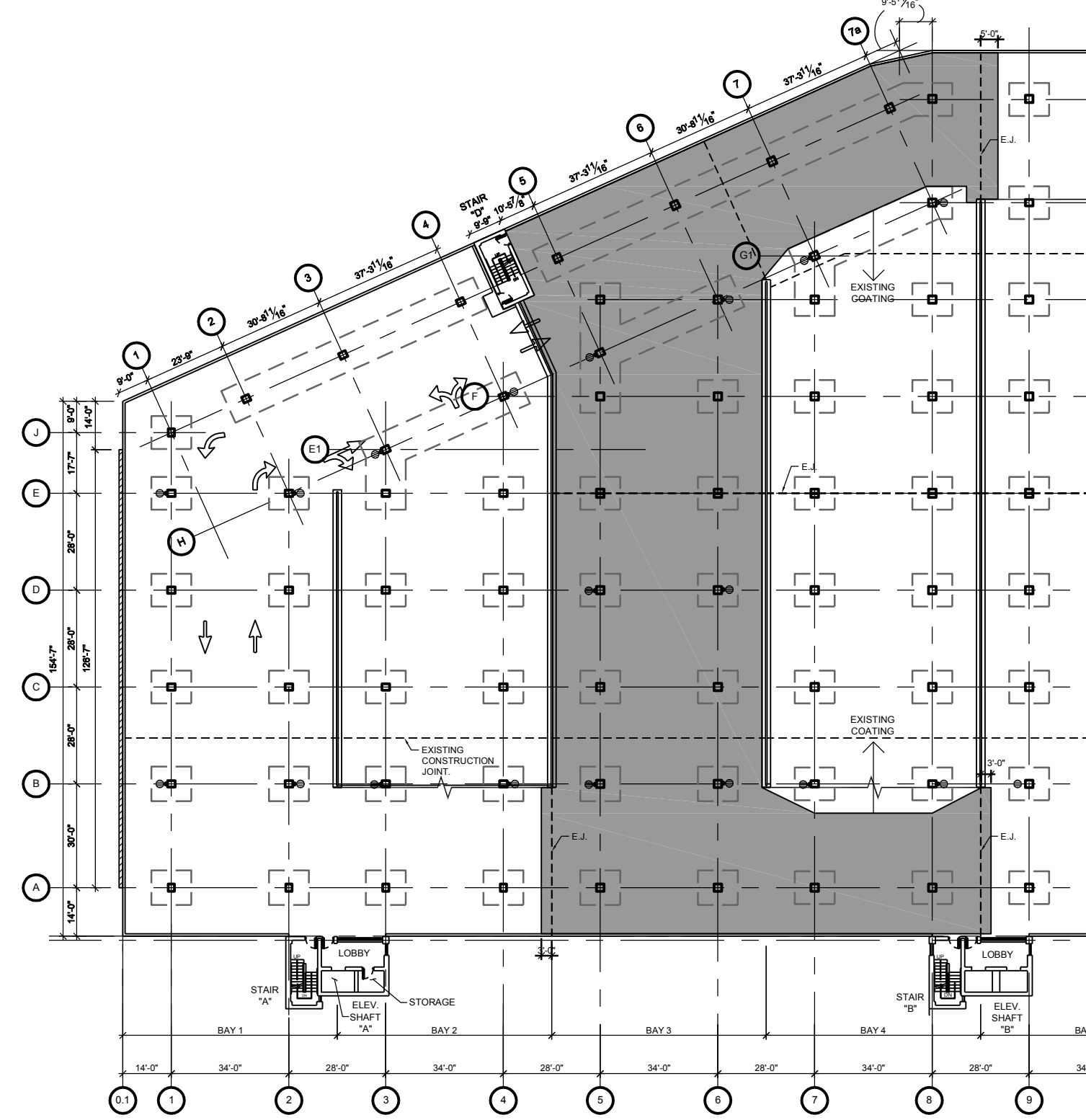
SHEET TITLE:

LEVEL 2
PLAN VIEW

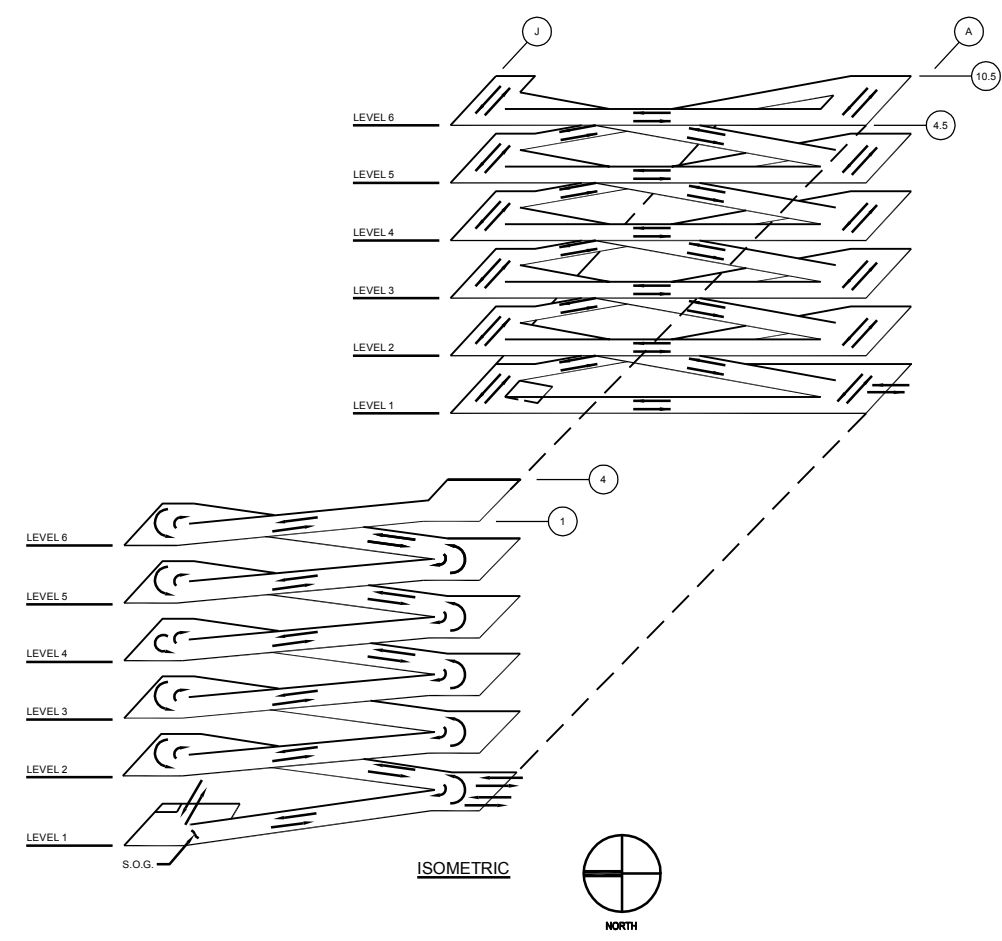
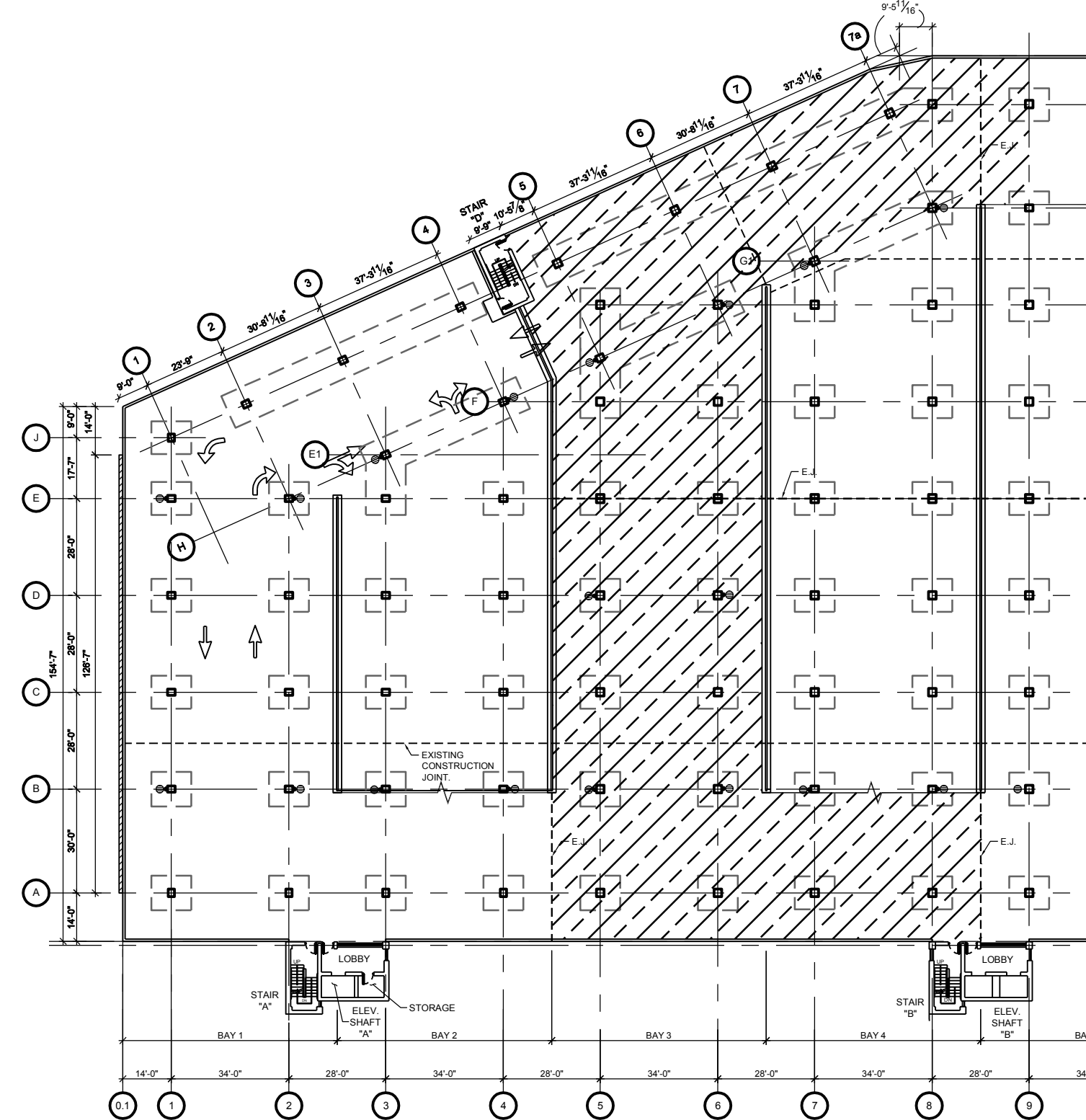
R-201

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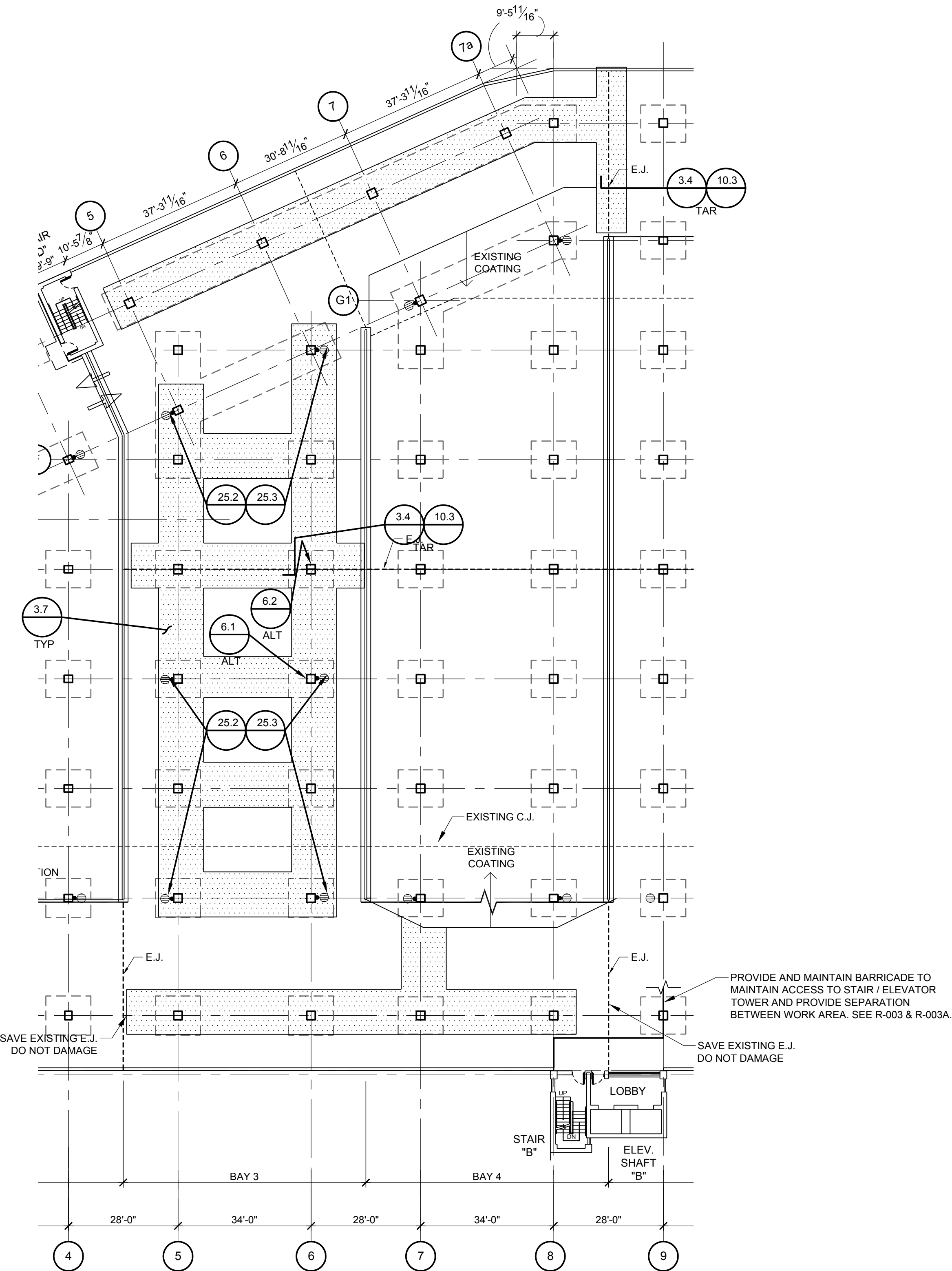


3 LEVEL 3 - ALTERNATE AREA OF TRAFFIC TOPPING INSTALLATION
(W.I. 16.1A) (ALTERNATE)



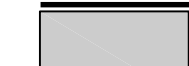

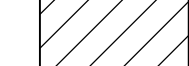


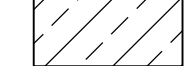
2 LEVEL 3 - FLOOR AREAS REQUIRING TEMPORARY SHORING PER W.I. 18.1
(TEMPORARY SHORING REQUIRED 2 LEVELS BELOW ENTIRE CROSS-HATCHED AREA)

SHEET NOTES:
1. SEE R-201 FOR SHEET NOTES.



1 LEVEL 3 PLAN VIEW

GENERAL LEGEND (FOR 1/R-201, 1/R-202 & 1/R-203)

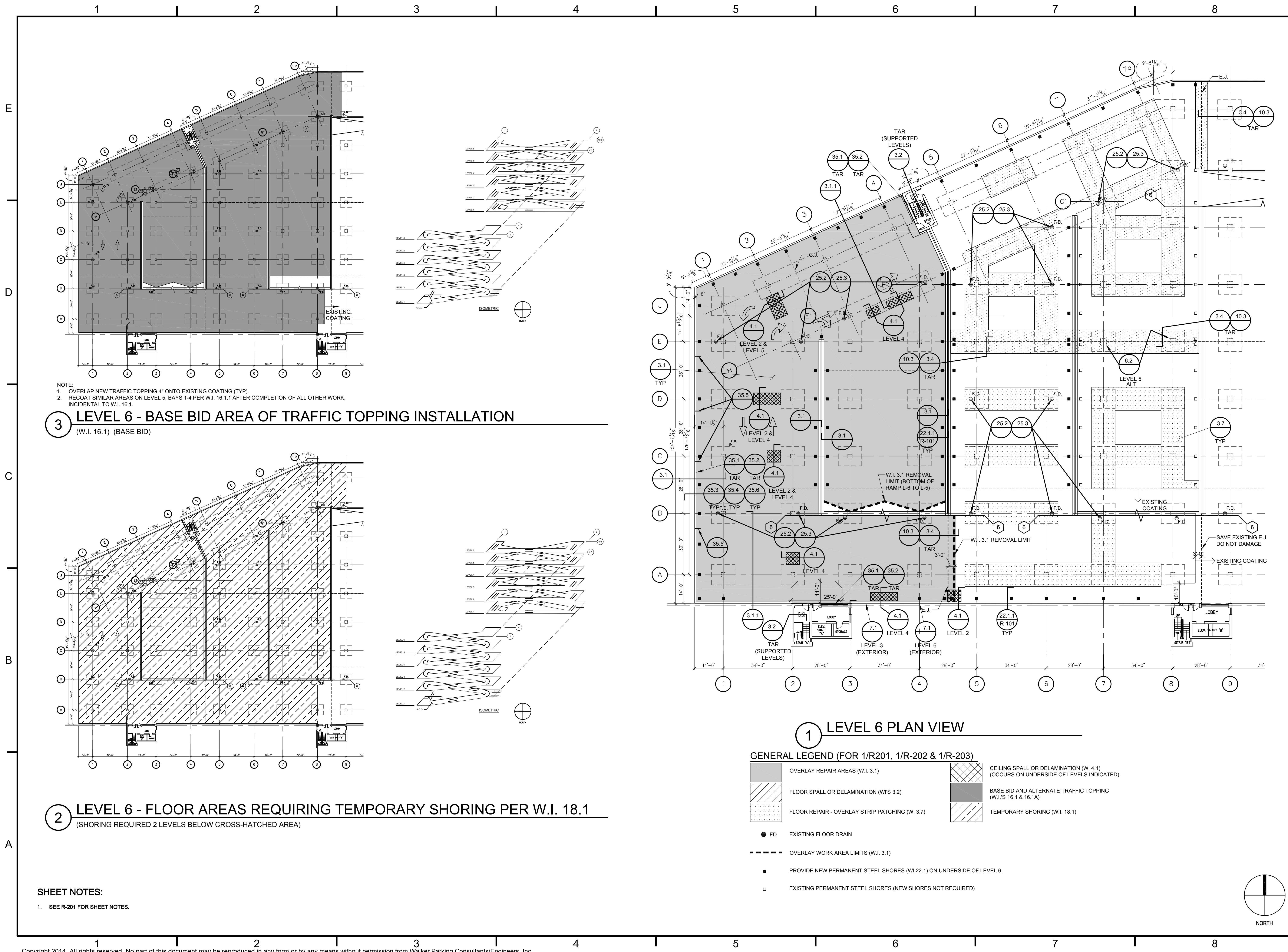
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|--|---|
|  OVERLAY REPAIR AREAS (W.I. 3.1) |  CEILING SPALL OR DELAMINATION (W.I. 4.1)
(OCCURS ON UNDERSIDE OF LEVELS INDICATED) |
|  FLOOR SPALL OR DELAMINATION (W.I. 3.2) |  BASE BID AND ALTERNATE TRAFFIC TOPPING
(W.I. 16.1 & 16.1A) |
|  FLOOR REPAIR - OVERLAY STRIP PATCHING (W.I. 3.7) |  TEMPORARY SHORING (W.I. 18.1) |
- FD EXISTING FLOOR DRAIN
- OVERLAY WORK AREA LIMITS (W.I. 3.1)
- PROVIDE NEW PERMANENT STEEL SHORES (W.I. 22.1) ON UNDERSIDE OF LEVEL 6.
- EXISTING PERMANENT STEEL SHORES (NEW SHORES NOT REQUIRED)

MARK	DATE	DESCRIPTION	ISSUE
REBID	03/31/14	BIDDING AND CONSTRUCTION	

PROJECT NO: 20-1433.00
DRAWN BY: ECW
CHECKED BY: DJP

SHEET TITLE:
LEVEL 3
PLAN VIEW

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NOTE:
1. OVERLAP NEW TRAFFIC TOPPING 4" ONTO EXISTING COATING (TYP).
2. RECOAT SIMILAR AREAS ON LEVEL 5, BAYS 1-4 PER W.I. 16.1.1 AFTER COMPLETION OF ALL OTHER WORK, INCIDENTAL TO W.I. 16.1.

3 LEVEL 6 - BASE BID AREA OF TRAFFIC TOPPING INSTALLATION (W.I. 16.1) (BASE BID)

2 LEVEL 6 - FLOOR AREAS REQUIRING TEMPORARY SHORING PER W.I. 18.1 (SHORING REQUIRED 2 LEVELS BELOW CROSS-HATCHED AREA)

SHEET NOTES:
1. SEE R-201 FOR SHEET NOTES.

1 LEVEL 6 PLAN VIEW

GENERAL LEGEND (FOR 1/R201, 1/R-202 & 1/R-203)

- | | |
|--|---|
| OVERLAY REPAIR AREAS (W.I. 3.1) | CEILING SPALL OR DELAMINATION (W.I. 4.1)
(OCCURS ON UNDERSIDE OF LEVELS INDICATED) |
| FLOOR SPALL OR DELAMINATION (W.I. 3.2) | BASE BID AND ALTERNATE TRAFFIC TOPPING
(W.I.'S 16.1 & 16.1A) |
| FLOOR REPAIR - OVERLAY STRIP PATCHING (W.I. 3.7) | TEMPORARY SHORING (W.I. 18.1) |
- FD EXISTING FLOOR DRAIN
- OVERLAY WORK AREA LIMITS (W.I. 3.1)
- PROVIDE NEW PERMANENT STEEL SHORES (W.I. 22.1) ON UNDERSIDE OF LEVEL 6.
- EXISTING PERMANENT STEEL SHORES (NEW SHORES NOT REQUIRED)

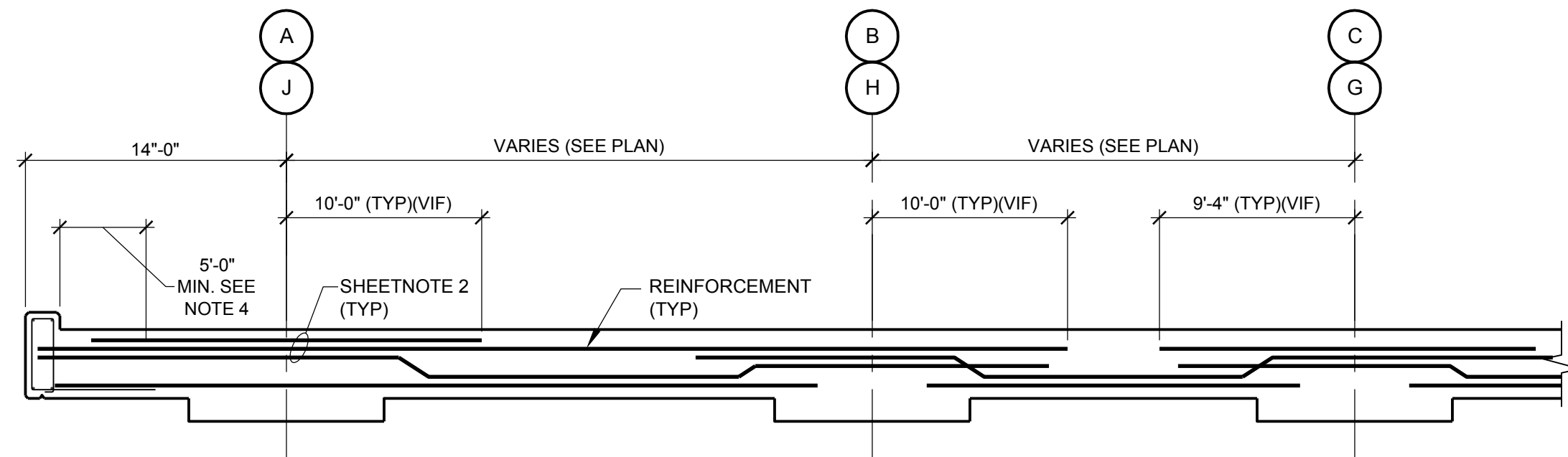
WAYNE STATE UNIVERSITY PARKING STRUCTURE #1 - 2014 DEFERRED MAINTENANCE & IMPROVEMENTS - REBID MICHIGAN DETROIT

MARK	DATE	DESCRIPTION	ISSUE
REBID	03/31/14	BIDDING AND CONSTRUCTION	
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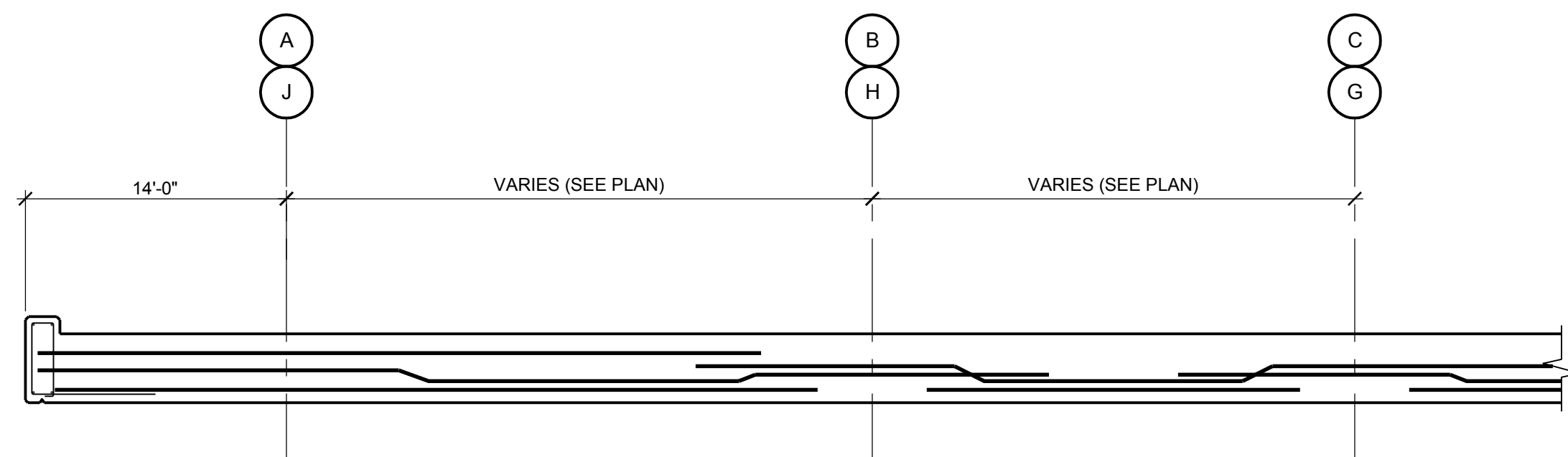
PROJECT NO: 20-1433.00
DRAWN BY: ECW
CHECKED BY: DJP
SHEET TITLE:

LEVEL 6
PLAN VIEW

R-203



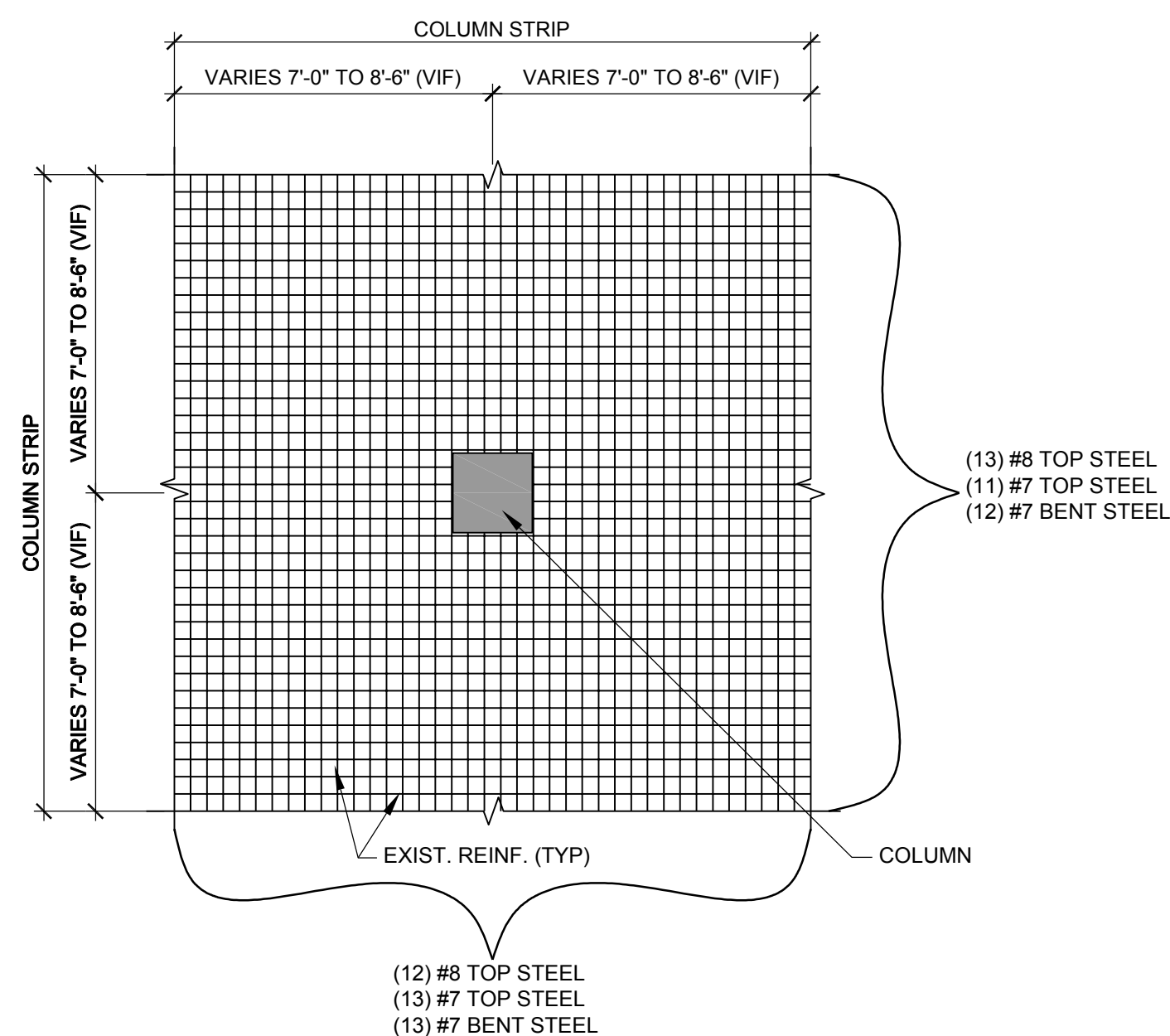
1 LONGITUDINAL COLUMN STRIP



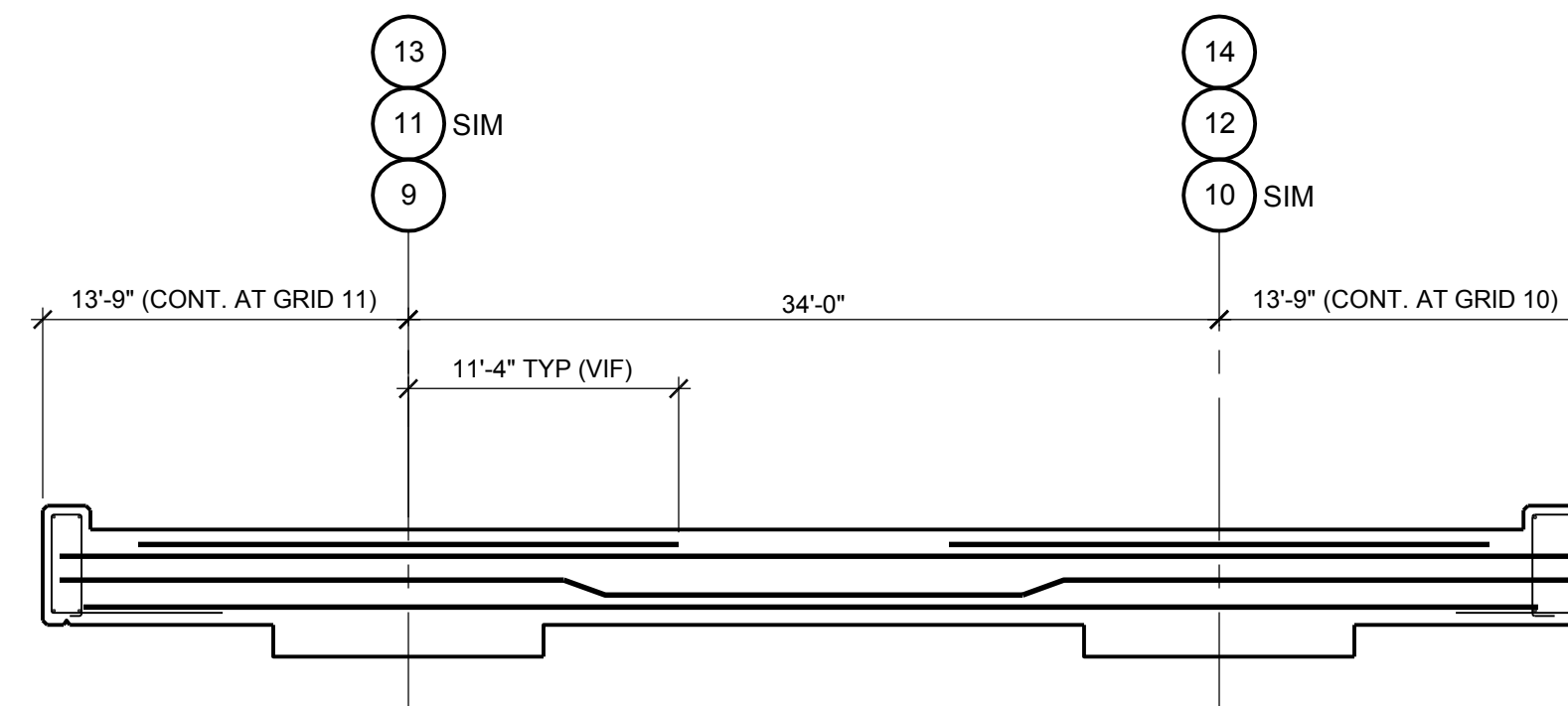
NOTE:

1. SEE DETAIL 1 / R-301 AND DETAIL SERIES 3.1 / R-501 FOR REMAINING INFO.

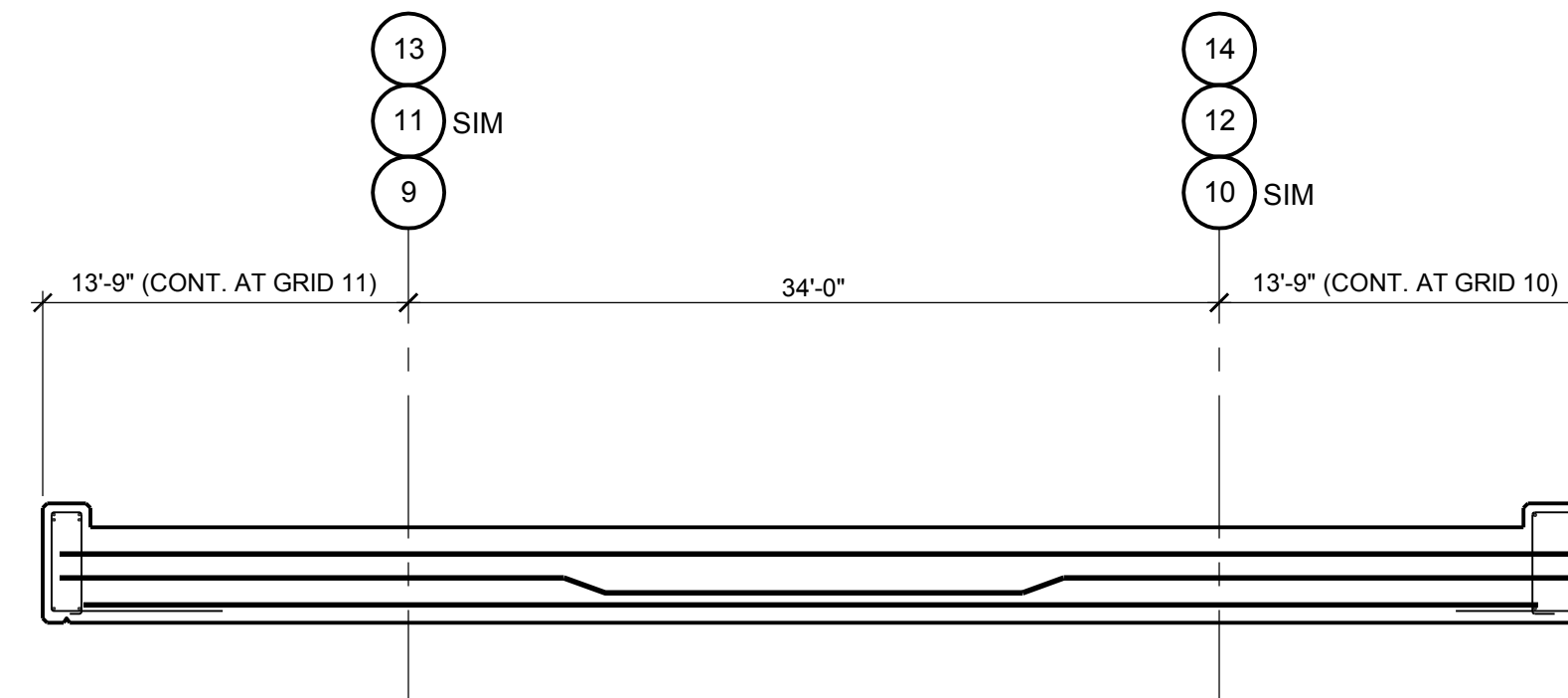
2 LONGITUDINAL MIDDLE STRIP



5 TYPICAL REINFORCING STEEL
AT COLUMN STRIP INTERSECTION



3 TRANSVERSE COLUMN STRIP



NOTE:

1. SEE DETAIL 1/R-301 AND DETAIL SERIES 3.1 / R-501 FOR REMAINING INFO.

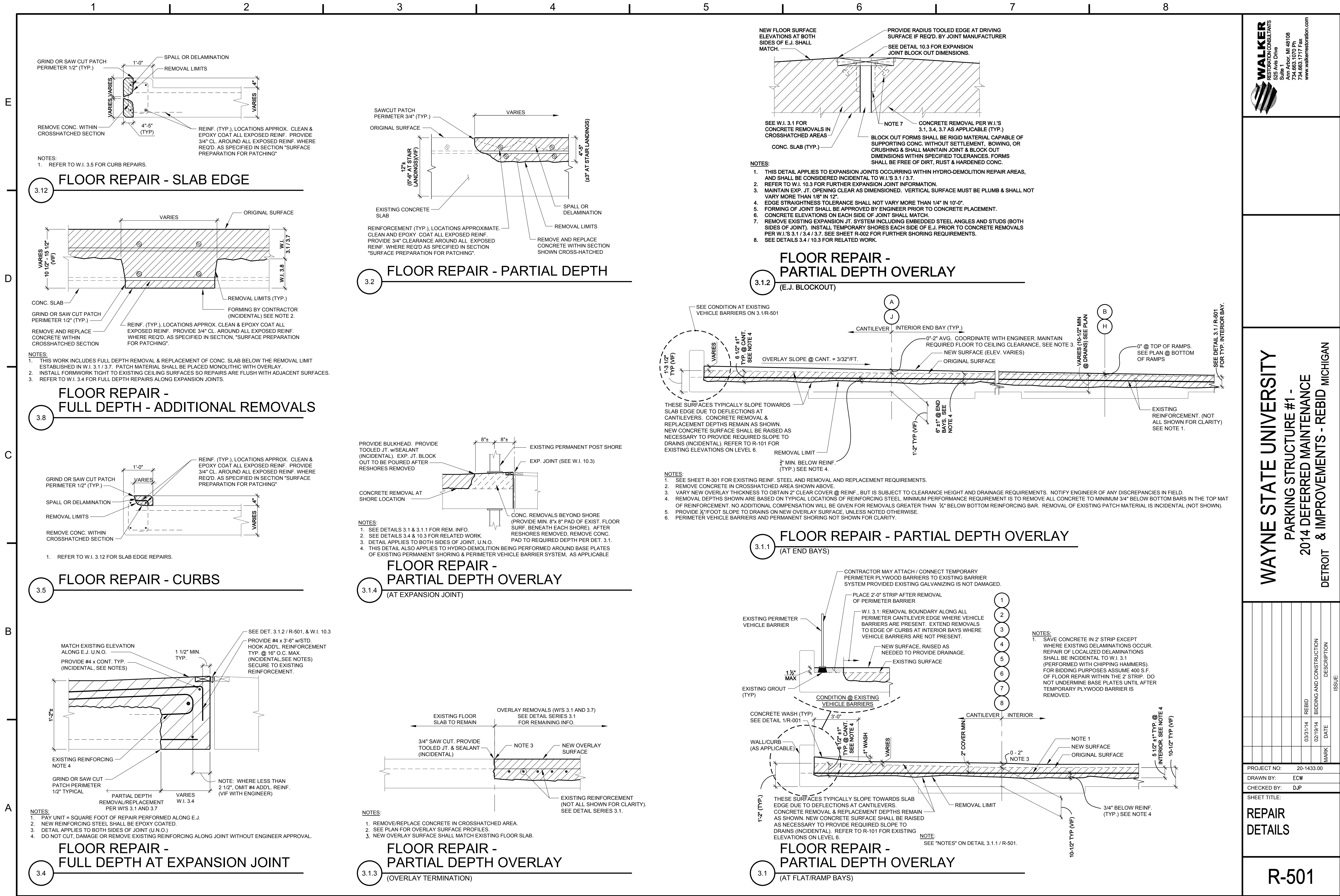
TRANSVERSE MIDDLE STRIP

4

- SHEET NOTES:**
1. SEE SHEET R-001 FOR GENERAL NOTES.
 2. EXISTING REINFORCING STEEL TO REMAIN, EXCEPT SEVERELY CORRODED BARS.
 3. REMOVE, REPLACE AND SUPPLEMENT DEFECTIVE REINFORCEMENT AS DIRECTED BY ENGINEER PER AWS 1.3, SECTION 10.
 4. WHERE EXISTING REINFORCING STEEL REMOVAL IS REQUIRED, SAVE A MINIMUM 5'-0" FROM FACE OF WALL/COLUMN/CURB (TYP). LAP NEW REINFORCEMENT WITH EXISTING A MINIMUM OF 4'-0".
 5. SAVE ALL EXISTING STEEL EXTENDING THROUGH COLUMNS.
 6. CONTACT OF BARS SHALL NOT CUT ANY BARS EMBEDDED IN EXISTING CONCRETE (AT ANY POINT) WITHOUT OBTAINING APPROVAL FROM ENGINEER, ON A CASE-BY-CASE BASIS.
 7. WHERE REPLACEMENT BAR LENGTH IS GREATER THAN 25'-0", LAP SPLICE SHALL BE LOCATED A MINIMUM OF 6'-0" FROM TRANSVERSE COLUMN LINE ON THE NON-CANTILEVER SIDE. ALL OTHER BARS SHALL BE CONTINUOUS.
 8. DETAILS ON THIS SHEET SHOW TYPICAL EXISTING REINFORCING STEEL LAYOUT. ACTUAL FIELD CONDITIONS MAY VARY. REFER TO DETAIL SERIES 3.1 FOR CONCRETE REMOVAL REQUIREMENTS.

[illegible]

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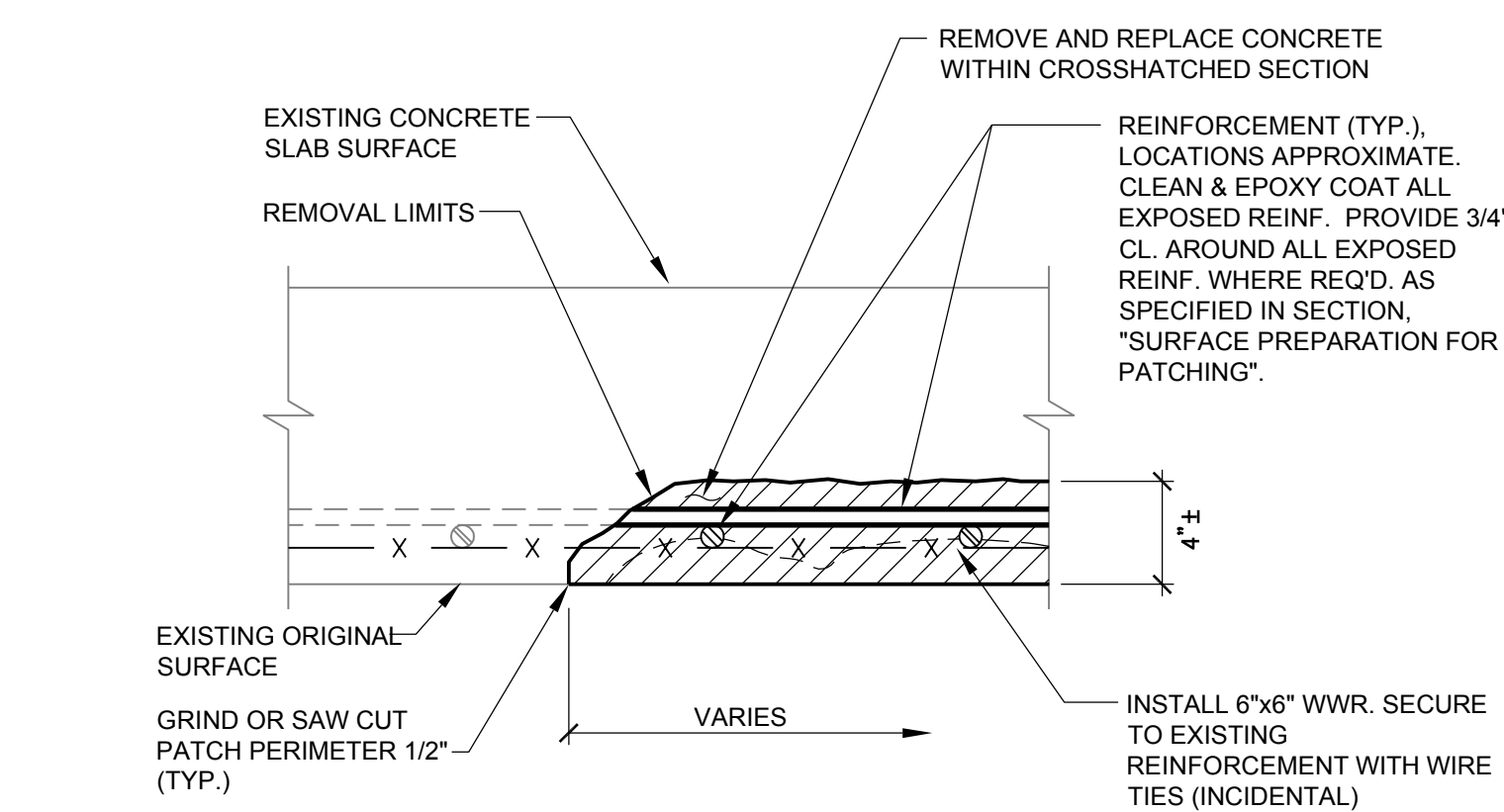
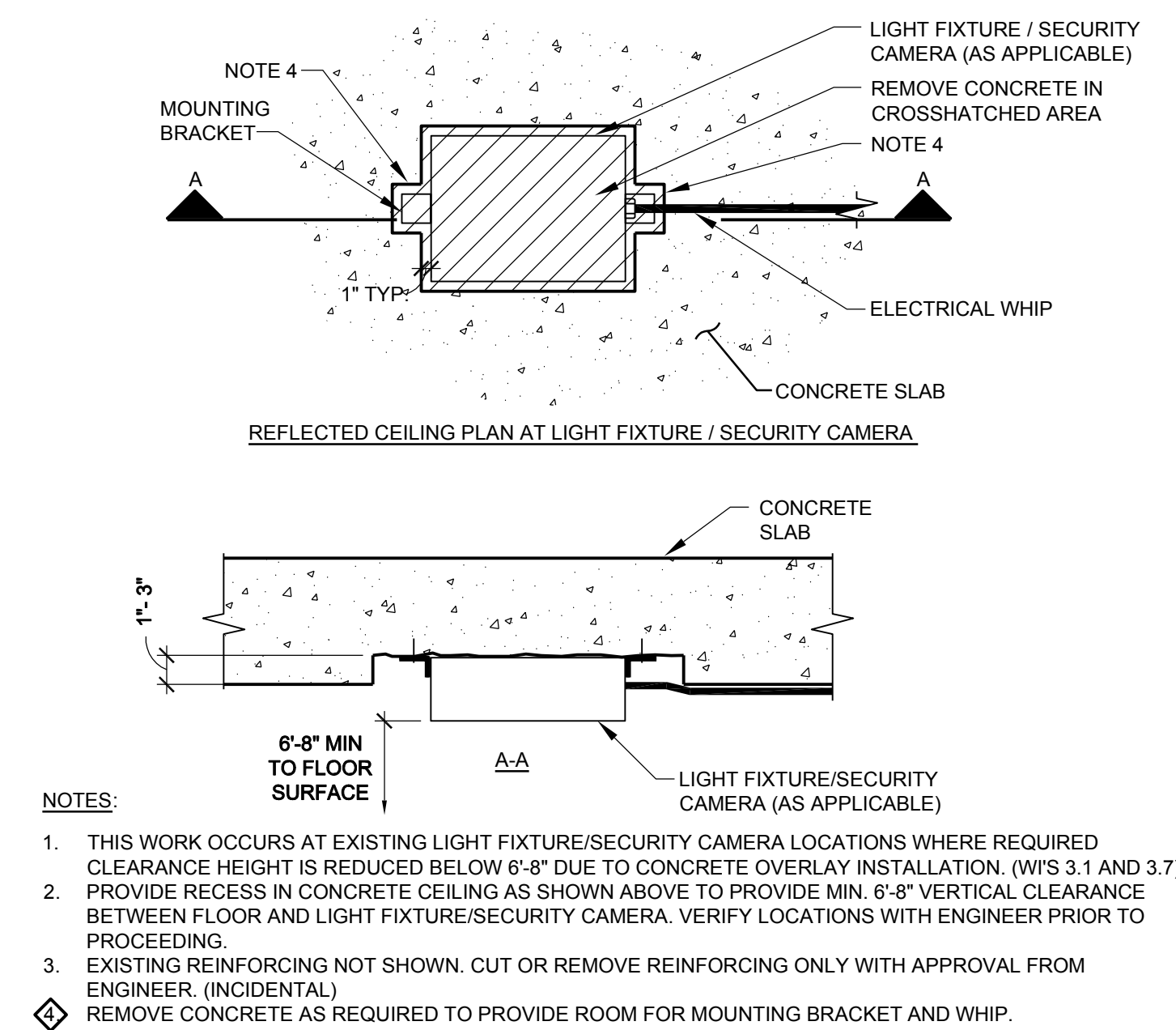
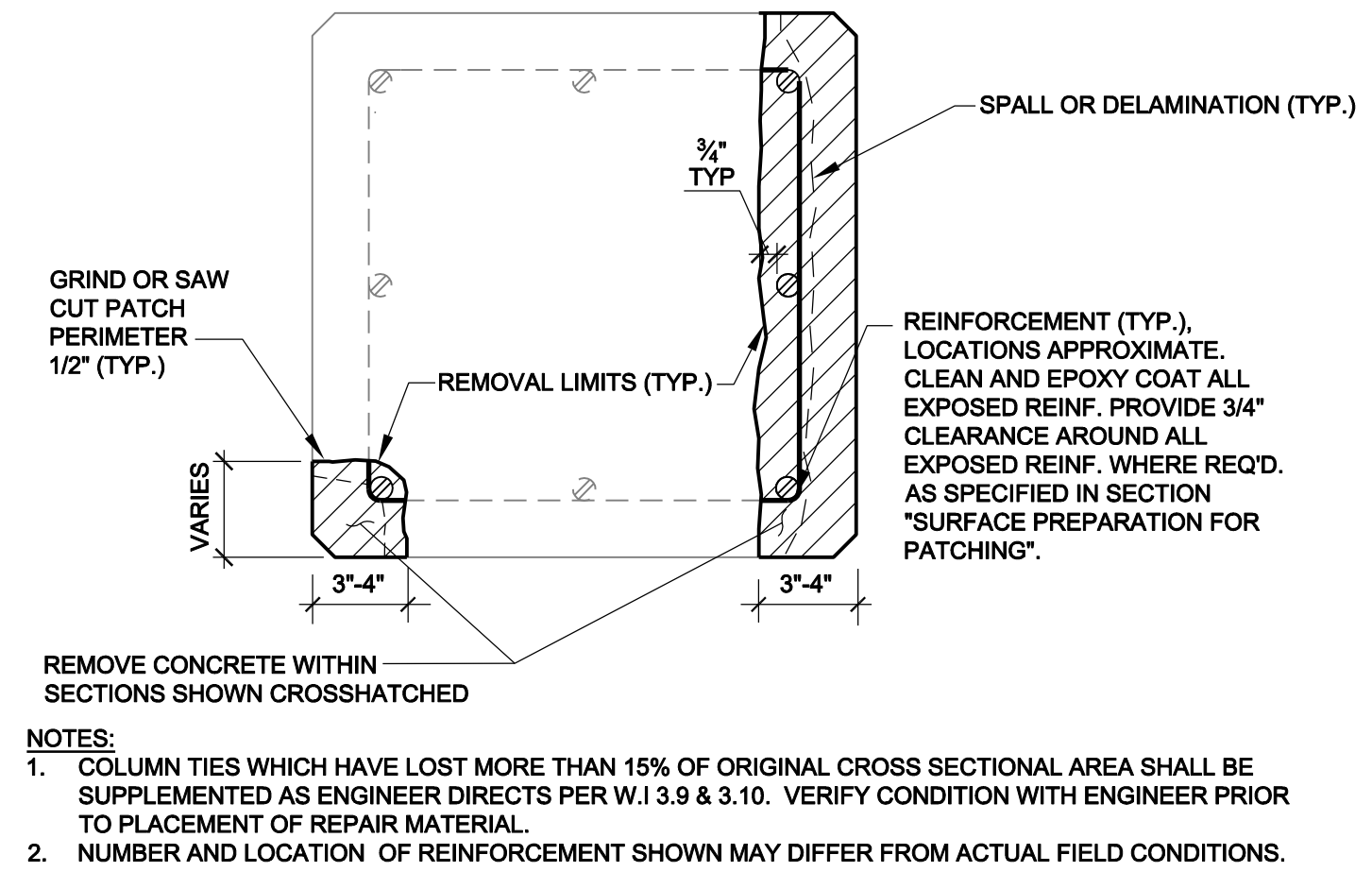
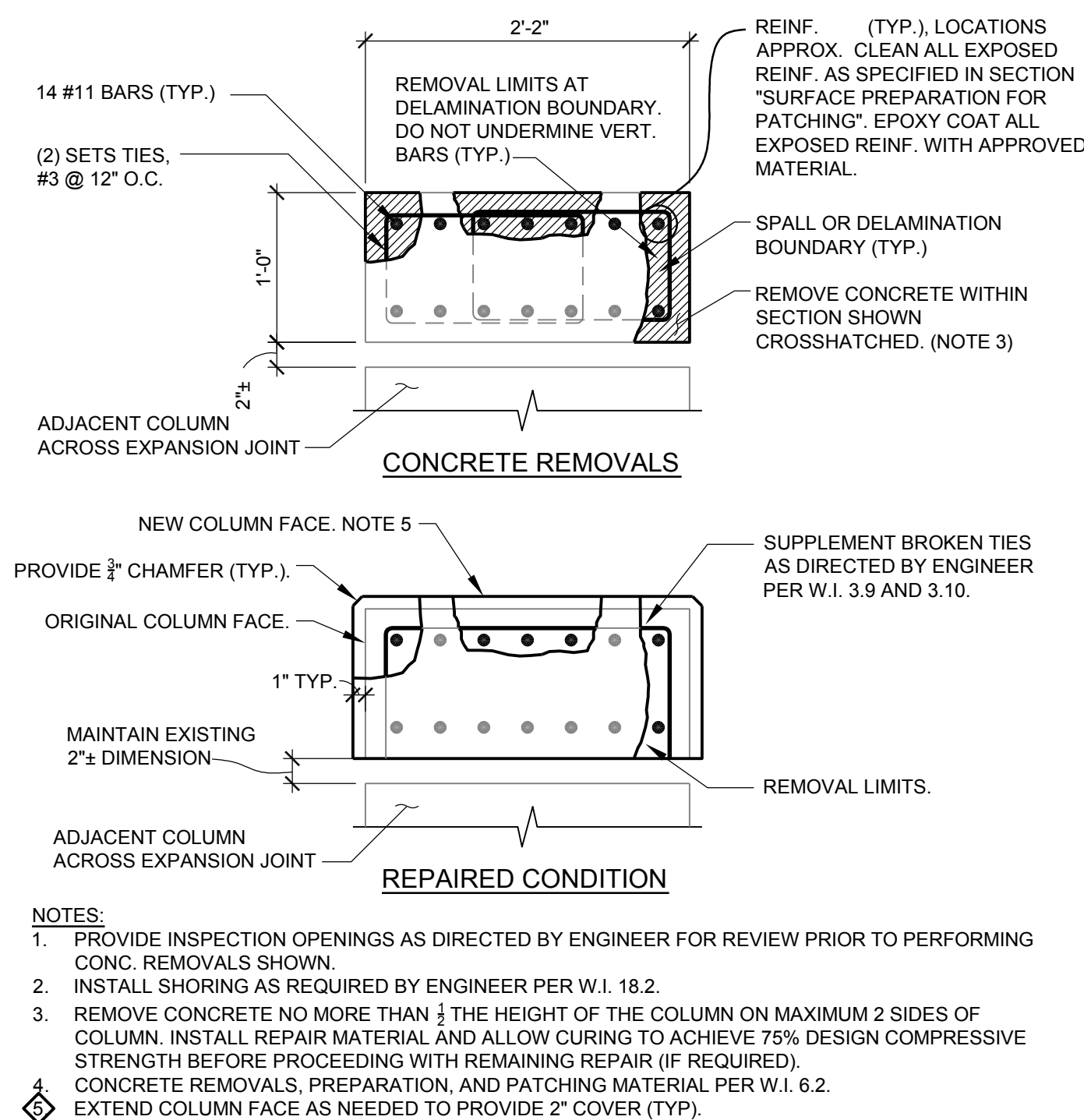
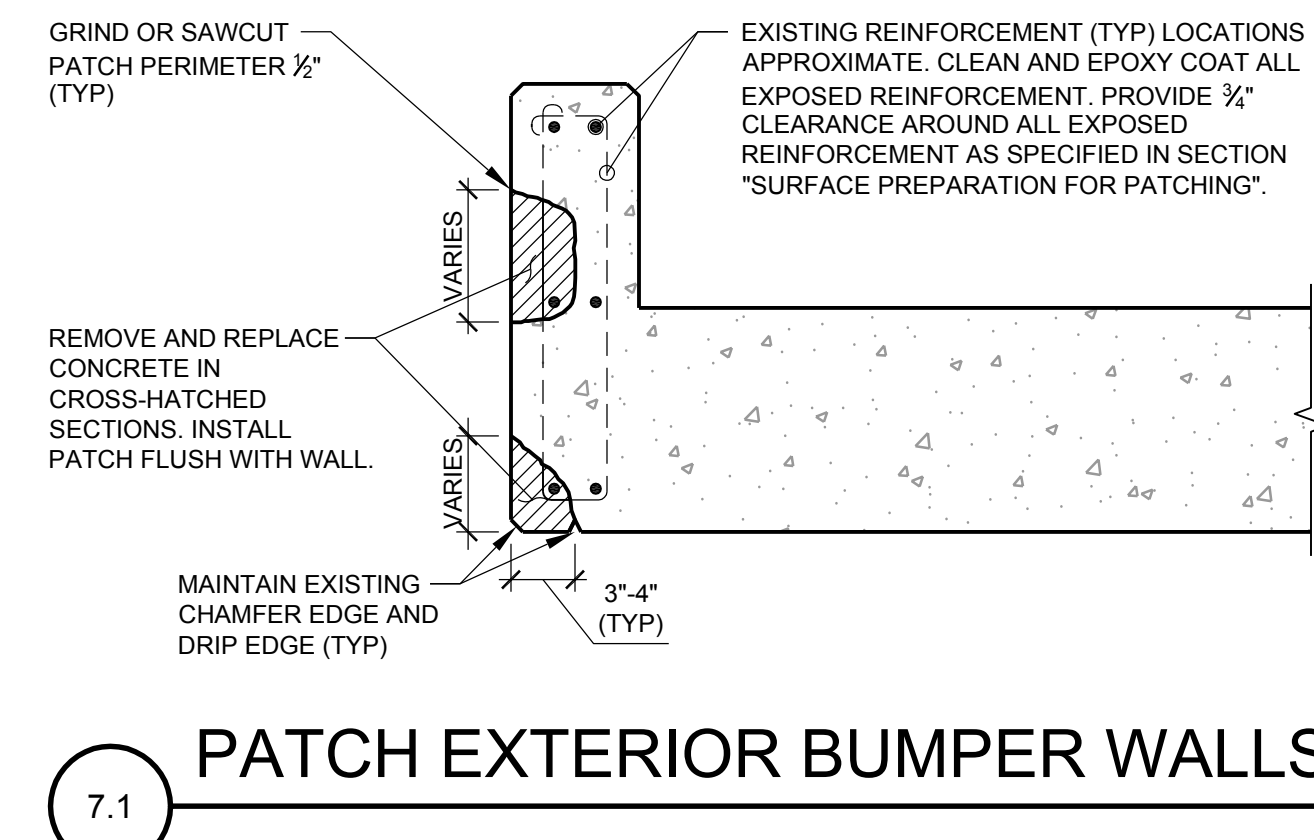
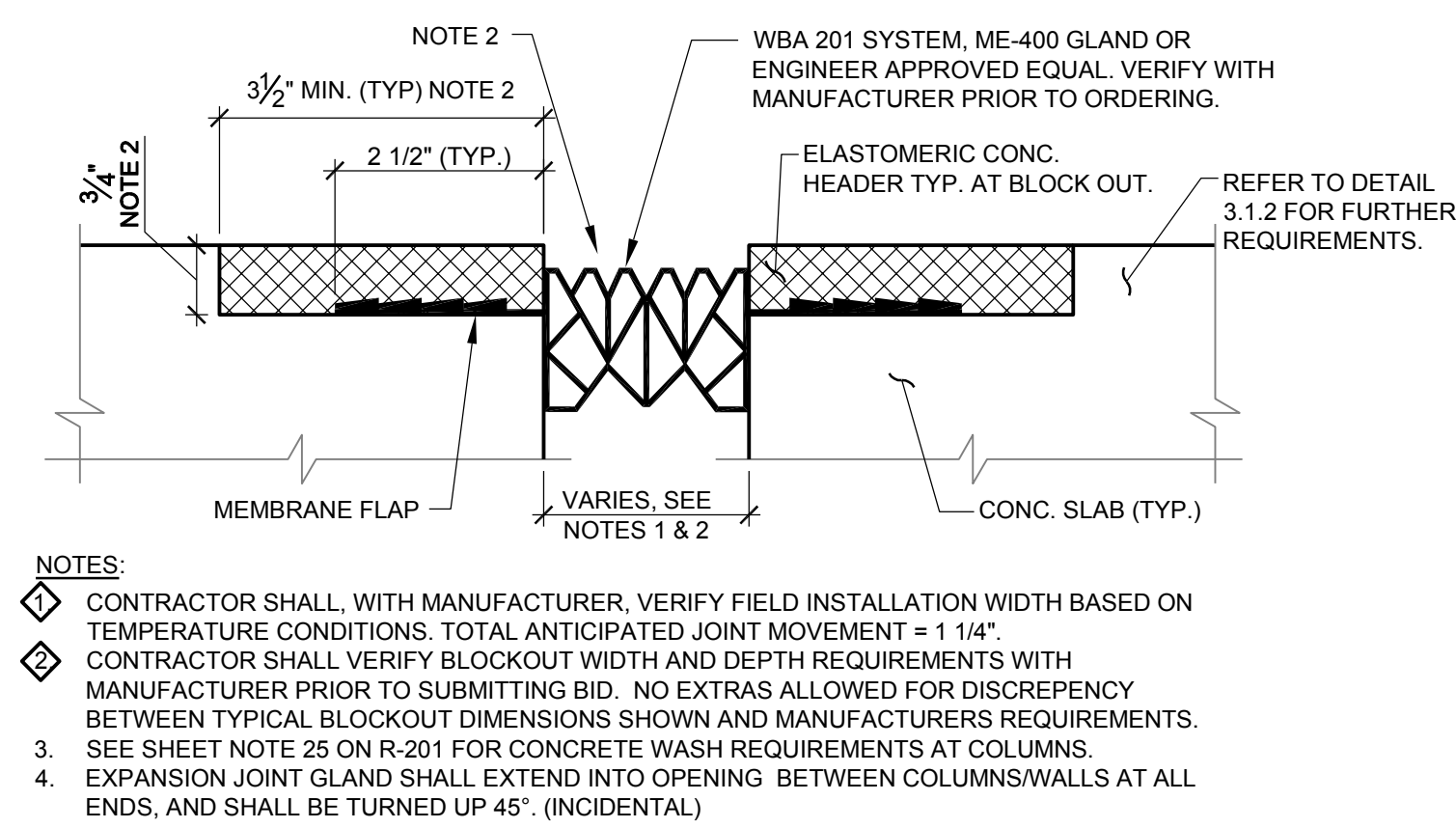
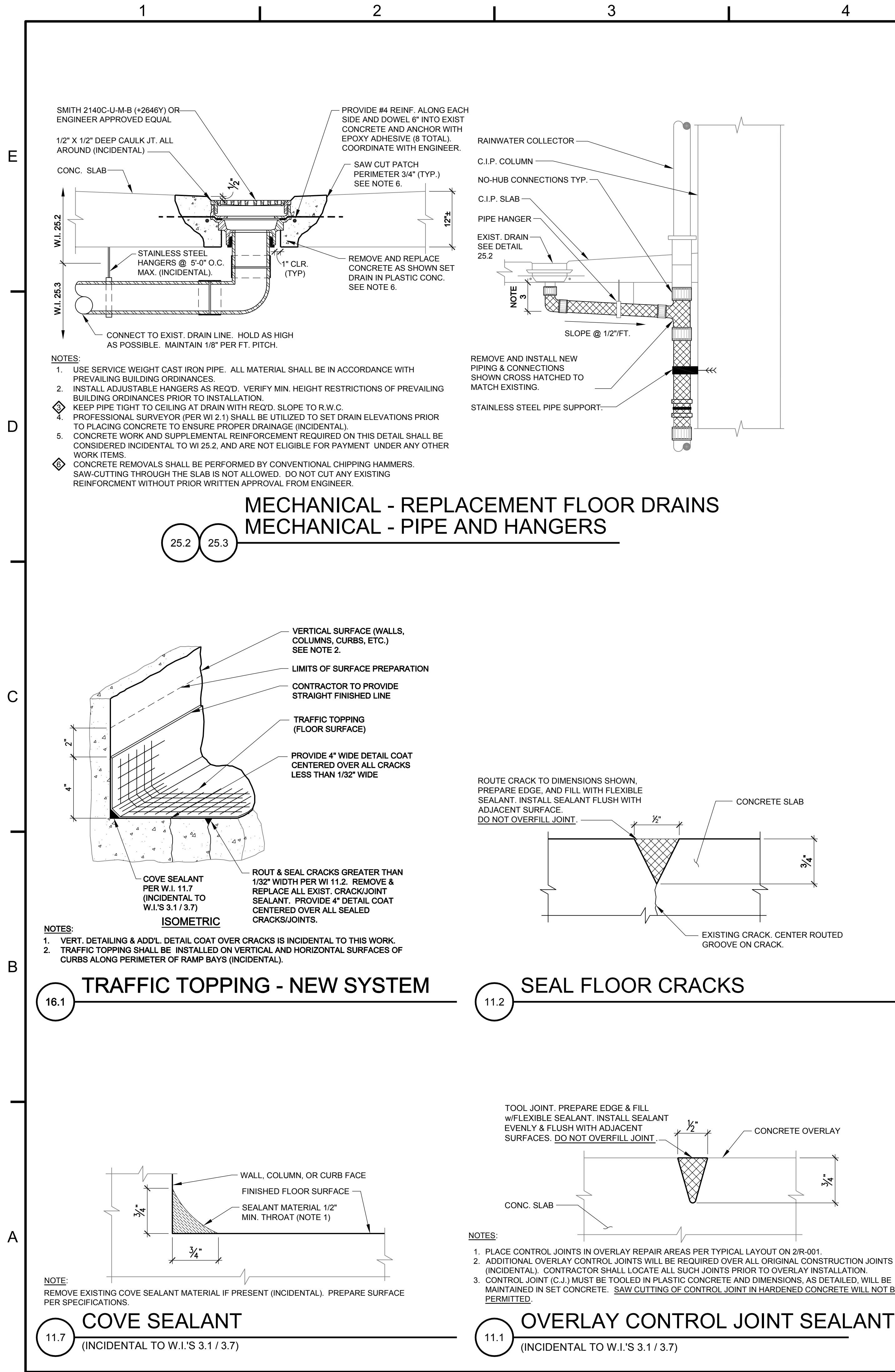
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SHEET TITLE:

REPAIR
DETAILS

R-501

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& IMPROVEMENTS - REBID MICHIGAN
DETROIT

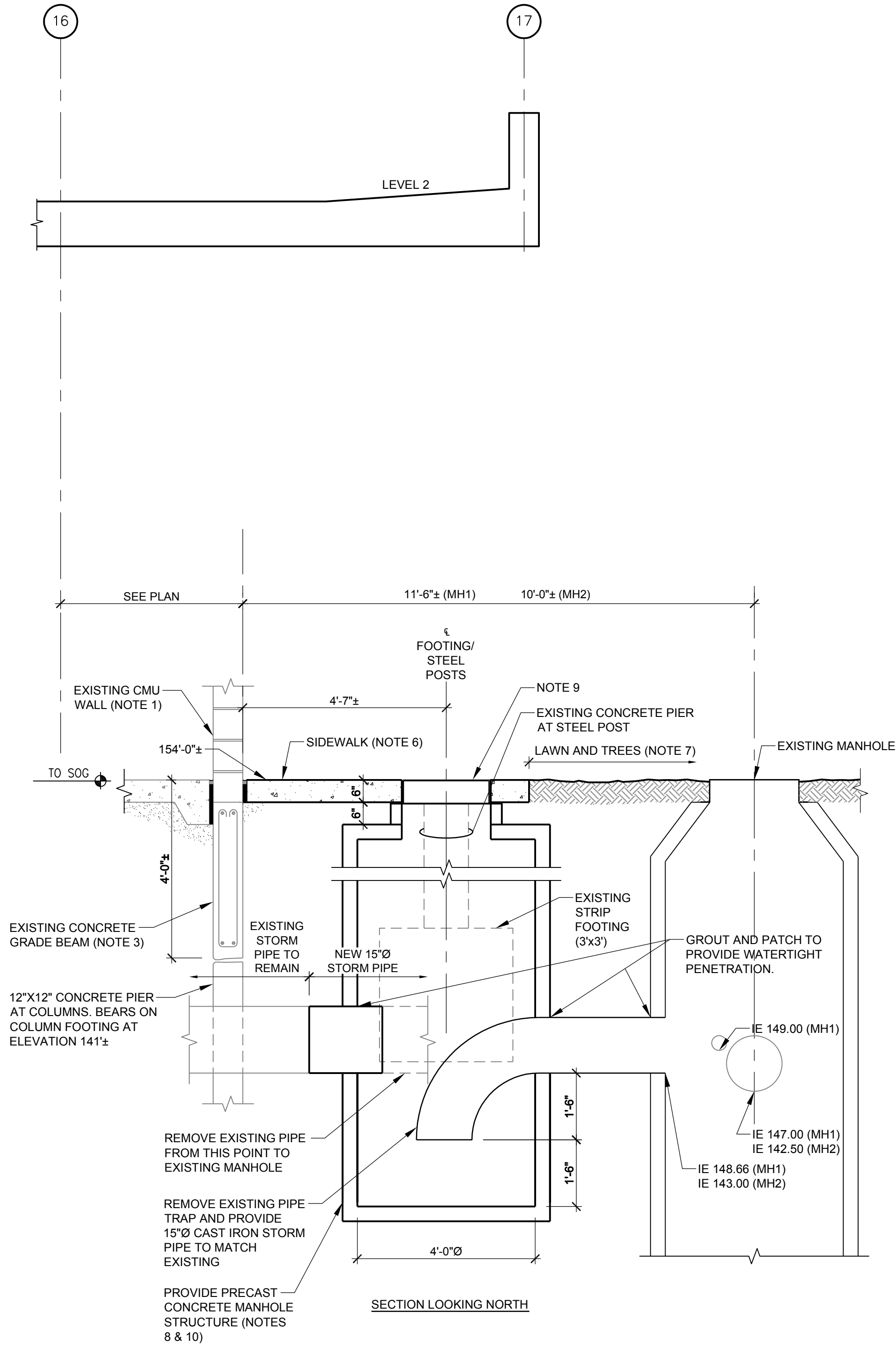
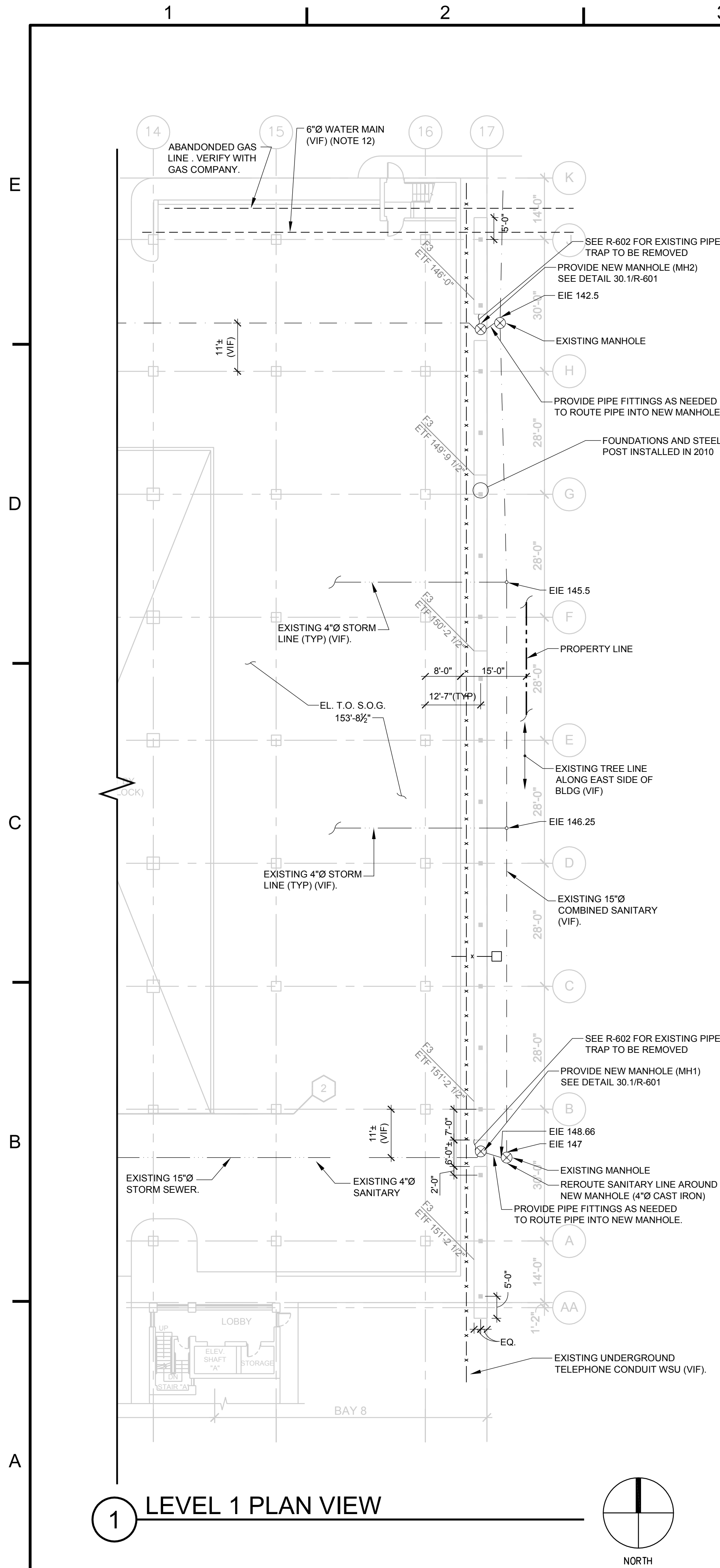
MARK	DATE	DESCRIPTION	ISSUE
REBID	03/31/14	BIDDING AND CONSTRUCTION	
	02/19/14		

PROJECT NO: 20-1433.00
DRAWN BY: ECW
CHECKED BY: DJP
SHEET TITLE:

REPAIR
DETAILS

R-502

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LEGEND

- = EXISTING PERMANENT STEEL SHORES
- x — x — x — = EXISTING UNDERGROUND TELEPHONE CONDUIT (WSU)(VIF)
- · — · — · — = EXISTING UNDERGROUND STORM PIPE (VIF)
- — — — — = UNDERGROUND SANITARY (VIF)
- ⊗ = EXISTING MANHOLE
- EIE xxx.xx = EXISTING INVERT ELEVATION
- ETF xxx'-xx" = ELEVATION TOP OF FOOTING
- F3 = EXISTING FOOTING MARK
- - - - - = ABANDONED WATER OR GAS LINE (VIF)

SHEET NOTES - REQUIREMENTS FOR WI 30.1 (SEWER SYSTEM MODIFICATIONS AND CLEANING):

- WI 30.1 (SEWER SYSTEM MODIFICATIONS AND CLEANING) INVOLVES THE INSTALLATION OF TWO NEW MANHOLES ALONG THE EAST SIDE OF THE STRUCTURE AS SHOWN ON 1/R601, REMOVING THE EXISTING STORM TRAP AT THIS LOCATION REROUTING THE PIPE TO CONNECT TO THE NEW MANHOLE AND EXISTING MANHOLE. WORK ALSO INCLUDES CLEANING/JETTING OF ALL BURIED STORM PIPES AND ASSOCIATED DRAIN BASINS WITHIN THE PARKING STRUCTURE FOOTPRINT INCLUDING BASINS ON LEVEL 1, AND THE SANITARY PIPE LINE ALONG THE SOUTH END OF THE STRUCTURE. SEE THE ORIGINAL DESIGN M1 DRAWING ON DRAWING R-602 FOR GENERAL PIPE AND BASIN LOCATIONS (CLEANOUTS VARY FROM THAT SHOWN ON DRAWING, VIF). UTILIZE THE "BACK JETTING" PROCESS ALONG WITH A VACUUM TRUCK TO CLEAN AND DISPOSE OF ALL DEBRIS AND WASTE REMOVED FROM THE PIPES. AFTER JETTING, PERFORM CAMERA INSPECTION TO VERIFY INTEGRITY OF PIPE. COORDINATE TIMING OF THIS CAMERA INSPECTION FOR OWNER TO BE PRESENT WHEN VIDEO SURVEY IS PERFORMED.
- SUBMIT WORK PLAN, SCHEDULE AND PROPOSED WORK PROCEDURES FOR OWNER REVIEW. CONFIRM DISTANCE FROM EXISTING MANHOLE TO DRAIN TRAP IN ORDER TO CONFIRM NEW MANHOLE LOCATION BEFORE PROCEEDING WITH ANY DEMOLITION/EXCAVATION WORK.
- DO NOT UNDERMINE GRADE BEAMS AND FOOTINGS. PROVIDE SOIL RETENTION SYSTEM, BRACING AND UNDERPINNING AS REQUIRED TO PREVENT ANY SETTLEMENT. USE SOIL RETENTION SYSTEM THAT MINIMIZES DISTURBANCE TO SURROUNDING HARDSCAPE/LANDSCAPE FEATURES.
- DO NOT DAMAGE UNDERGROUND UTILITIES. SUPPORT UNDERGROUND UTILITIES WITHIN EXCAVATION AREA.
- CONTRACTOR SHALL CONTACT MISS DIG AND LOCATE ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING. ANY CONTRACTOR CAUSED DAMAGE TO UTILITIES SHALL BE REPAIRED BY CONTRACTOR AT NO COST TO OWNER.
- REMOVE AND REPLACE CONCRETE SIDEWALK TO FACILITATE MANHOLE INSTALLATION. TERMINATE REMOVALS AT AN EXISTING CONTROL JOINT. PLACE NEW CONCRETE SIDEWALK TO MATCH EXISTING.
- RESTORE LAWN AND LANDSCAPING TO MATCH EXISTING. PROVIDE SOIL EROSION AND SEDIMENTATION CONTROLS AS REQUIRED BY STATE AND LOCAL AUTHORITY. DO NOT DAMAGE TREES.
- PRECAST CONCRETE MANHOLE IS PERFORMANCE DESIGN AND AS A MINIMUM SHALL MEET THE FOLLOWING REQUIREMENTS:
 - DESIGN TO WITHSTAND ALL APPLICABLE LOADS INCLUDING BUT NOT LIMITED TO SOIL PRESSURE AT DEPTHS SHOWN, HS-20 LOAD APPLIED AT GROUND SURFACE. MINIMUM OF 5000 PSI CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS.
 - WATERPROOF JOINTS AND APPLY BITUMINOUS DAMP PROOFING TO ALL EXTERIOR SURFACES.
 - PROVIDE CORROSION RESISTANT LADDER RUNGS AT 12 INCH SPACING.
 - OFFSET MANHOLE OPENING TO ALIGN WITH SIDE OF MANHOLE WHERE LADDER RUNGS OCCUR. NOTE: DO NOT PURCHASE MANHOLE UNTIL AFTER SOIL EXCAVATION, CONTRACTOR IS ABLE TO CONFIRM THERE IS ADEQUATE ROOM FOR THE STRUCTURE.
- MANHOLE FRAME, FLANGE AND LID (SELF SEALING) SHALL BE NEENAH R-1673-A.
- PROVIDE COMPACTED STONE BASE BELOW MANHOLE. BACKFILL HOLE WITH EXCAVATED MATERIAL. COMPACT TO 95% OF MAXIMUM DRY DENSITY PER ASTM MODIFIED PROCTOR METHOD
- PROVIDE FENCING BARRICADES AND SIGNAGE TO PREVENT ACCESS TO EXCAVATION AND WORK AREA.
- EXISTING ELEVATIONS SHOWN ARE FROM ORIGINAL/REPAIR DRAWINGS AND BASED ON CITY OF DETROIT DATUM.



WAYNE STATE UNIVERSITY PARKING STRUCTURE #1 - 2014 DEFERRED MAINTENANCE & IMPROVEMENTS - REBID MICHIGAN DETROIT

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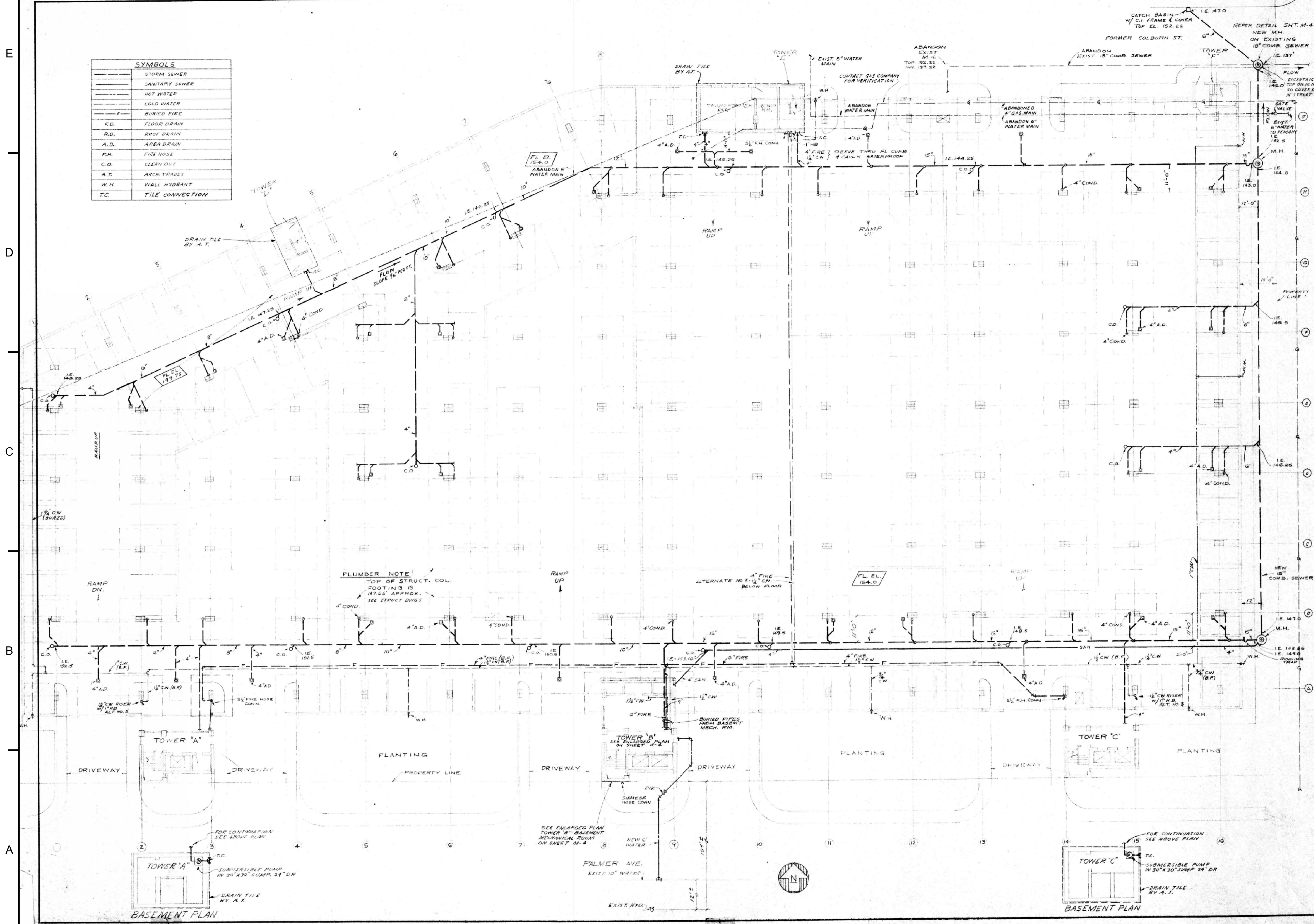
PROJECT NO: 20-1433.00
DRAWN BY: MKA
CHECKED BY: RKG

SHEET TITLE:
W.I. 30.1 - SEWER
SYSTEM MODIFICATIONS
AND CLEANING

R-601

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SYMBOLS	
	STORM SEWER
	SANITARY SEWER
	HOT WATER
	COLD WATER
	BURIED FIRE
	FLOOR DRAIN
	ROOF DRAIN
	AREA DRAIN
	FIRE HOSE
	CLEAN OUT
	ARCH. TRADES
	WALL HYDRANT
	TILE CONNECTION



DATE 1/20/05
J.C. T.A.E.
DR. T.A.E.
CHK. P.W.G.
APR. P.W.G.

ISSUED FOR
GUY CONT BIDS 3-10-05

REVISIONS

NO.	DESCRIPTION

PARKING STRUCTURE FOR WAYNE STATE UNIVERSITY
DETROIT, MICHIGAN

O'DELL, HEWLETT & LUCKENBACH
ASSOCIATES
ARCHITECTS
950 N. HUNTER BOULEVARD
BIRMINGHAM, MICHIGAN

FIRST DECK
PLAN SHOWING
PLUMBING &
FIRE PROTECTION
SCALE 1/8" = 1'-0"

JOB NO.
63-49

SHEET NO.
M-1

WALKER
RESTORATION CONSULTANTS
525 Avis Drive
Suite 100, MI 48108
734.663.1070 Ph
734.663.1717 Fax
www.walkerrestoration.com

PROJECT NO: 20-1433.00

DRAWN BY: ECW

CHECKED BY: DJP

SHEET TITLE:

REFERENCE
DRAWING
(DO NOT SCALE)

R-602

WAYNE STATE UNIVERSITY
PARKING STRUCTURE #1 -
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DETROIT

MARK	DATE	DESCRIPTION	ISSUE
REBID	03/31/14	BIDDING AND CONSTRUCTION	
	02/19/14		