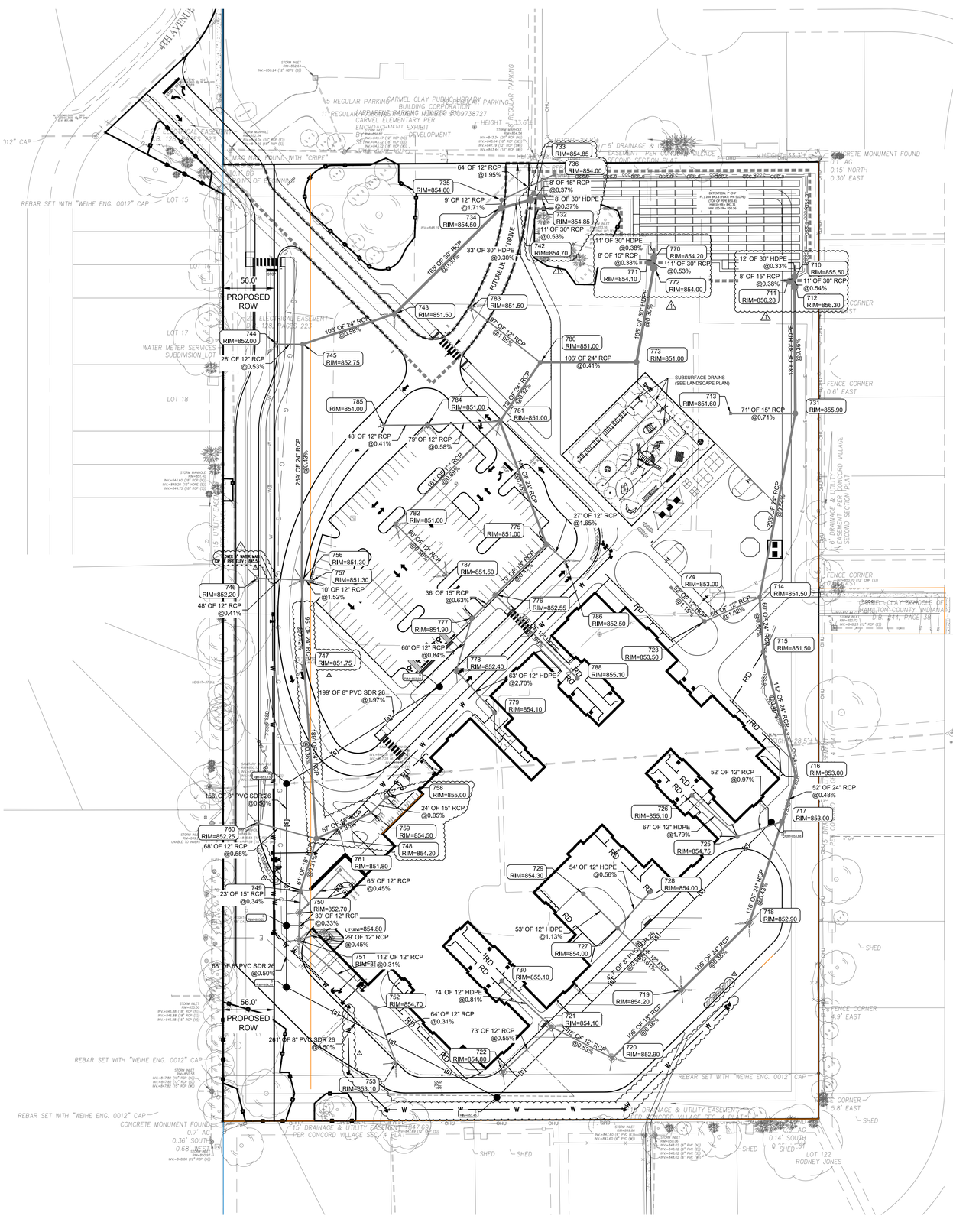

0 60' 120'

SCALE: 1" = 60'

UTILITY NOTES

1. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR CONTINUATION OF UTILITIES WITHIN 5 FEET OF STRUCTURES.
2. PRESSURE UTILITY MAINS AND SERVICE LINES MAY NEED TO BE INSTALLED AT A DEPTH GREATER THAN THAT SPECIFIED OR SHOWN ON THE DRAWINGS TO CLEAR EXISTING AND PROPOSED CROSSING UTILITIES. IN SUCH CASES, THE CONTRACTOR SHALL INSTALL VERTICAL BENDS AS REQUIRED TO ACHIEVE APPROPRIATE CLEARANCE BETWEEN THE CROSSING UTILITIES.
3. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET BETWEEN WATER LINES AND SEWERS SHALL BE MAINTAINED AT ALL TIMES. A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN WATER LINES AND SEWERS SHALL BE MAINTAINED AT CROSSINGS. IN THE EVENT THAT MINIMUM SEPARATION REQUIREMENTS CANNOT BE MET, THE CONTRACTOR SHALL UTILIZE PRESSURE-TYPE WATER PIPE FOR THE SEWER PER CITY OF CARMEL STANDARDS.
4. WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 54 INCHES OF COVER AS MEASURED FROM THE TOP OF THE PIPE TO THE FINAL FINISH GRADE ABOVE THE PIPE.
5. THRUST BLOCKS OR JOINT RESTRAINTS SHALL BE INSTALLED ON ALL WATER LINES AT ALL BENDS, TEES AND HYDRANTS PER THE DETAILS.
6. WHERE WATER FITTINGS ARE REQUIRED, DUCTILE IRON (DI) FITTINGS SHALL BE USED. FITTING JOINTS SHALL BE OF STANDARD MJ TYPE (ANSI/AWWA C111/A21.11) OR PJ TYPE (ANSI/AWWA C111/A21.11).
7. DI FITTINGS SHALL CONFORM TO ANSI/AWWA C110/A21.10, 350 PSI AND SHALL BE CEMENT MORTAR LINED PER ANSI/AWWA C104/A21.4 AND SHALL BE OUTSIDE COATED WITH A BITUMINOUS COATING.
8. PIPE LENGTHS SHOWN ARE MEASURED FROM CENTER TO CENTER OF STRUCTURES ROUNDED TO THE NEAREST FOOT.
9. PIPE LENGTHS SHOWN FOR STORM SEWERS ARE MEASURED TO THE DOWNSTREAM END OF END SECTIONS.
10. WHERE GRADE MODIFICATIONS (CUT OR FILL) ARE SHOWN ADJACENT TO EXISTING VALVE BOX COVERS AND MANHOLE CASTINGS, THE VALVE BOX COVERS AND MANHOLE CASTINGS SHALL BE ADJUSTED FLUSH WITH THE PROPOSED GRADE.
11. ADJUSTMENTS OF EXISTING MANHOLE CASTINGS TO GRADE TO A MAXIMUM OF 12 INCHES SHALL BE MADE USING PRECAST CONCRETE ADJUSTING RINGS PROVIDED THE TOTAL HEIGHT OF EXISTING AND NEW ADJUSTING RINGS DOES NOT EXCEED 12 INCHES.
12. ADJUSTMENTS OF CASTINGS WHERE THE TOTAL HEIGHT OF ADJUSTING RINGS WOULD EXCEED 12 INCHES SHALL BE MADE BY REPLACING THE CONE AND/OR BARREL SECTION OF THE STRUCTURE.
13. PAVEMENTS, WALKS, CURBS AND OTHER SURFACE IMPROVEMENTS REQUIRING REMOVAL FOR INSTALLATION OF UNDERGROUND UTILITIES SHALL BE RESTORED TO THEIR PRESENT CONDITION UNLESS OTHERWISE SHOWN.
14. ALL INLET CASTINGS LOCATED WITHIN ASPHALT PAVEMENT AREAS SHALL INCLUDE A CONCRETE PAVED COLLAR EXTENDING A MINIMUM OF 24 INCHES IN ALL DIRECTIONS FROM THE EDGE OF THE CASTING PER THE DETAILS.
15. THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS, ETC. WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE OWNER, UTILITY COMPANIES, AND GOVERNING AUTHORITIES. THE CONTRACTOR SHALL INSTALL AS NECESSARY, TEMPORARY SITE LIGHTING, GAS, SANITARY, WATER, STORM, ELECTRIC, TELEPHONE, AND CABLE SERVICES TO SERVICE BUILDING(S) TO REMAIN OPEN.
16. CONTRACTOR TO PROVIDE SLEEVES UNDER FOOTINGS OR THROUGH FOUNDATIONS FOR UTILITY CONNECTIONS.
17. CONTRACTOR SHALL PROVIDE ALL BENDS, FITTINGS, ADAPTERS, ETC. AS REQUIRED FOR PIPE CONNECTIONS TO BUILDING/CANOPY STUB OUTS. INCLUDING ROOF/FOOTING DRAIN CONNECTIONS TO ROOF LEADERS AND TO STORM DRAINAGE SYSTEM.
18. CONTRACTOR TO PROVIDE AND INSTALL CONDUIT FOR SITE LIGHTING PER SITE LIGHTING PLAN (BY OTHERS).
19. CONTRACTOR TO PROVIDE AND INSTALL CONDUIT FOR IRRIGATION PER IRRIGATION PLAN (BY OTHERS).
20. CONTRACTOR WILL BE RESPONSIBLE TO REPAIR, REPLACE, AND/OR RECONNECT ANY EXISTING DRAINAGE TILES NOT SHOWN ON THE PLANS, WHICH CROSS THROUGH EXCAVATED TRENCHES. ANY DRAINAGE TILE ENCOUNTERED IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND A MEASUREMENT TAKEN FROM THE NEAREST MANHOLE OR INLET STRUCTURE TO THE CENTERLINE OF THE TILE.
21. CONTRACTOR SHALL COORDINATE DEMO, RETIREMENT OF EXISTING LINE, NEW SERVICE LINE & METER. CONTACT 1-800-990-1930 AND / OR NEW SERVICE @ VECTREN.COM
22. ALL INLETS WITHIN PAVED AREAS SHALL INCLUDE AT LEAST TWO 20-FOOT SUBSURFACE DRAINS SET 1.5 FEET BELOW THE TOP OF CASTING.

UTILITY KEY NOTE LEGEND

D - DRAINAGE / STORM SEWER

- (D1) XCELERATOR XC-5 (SEE DETAIL SHEET C603)
- (D1A) XCELERATOR XC-6 (SEE DETAIL SHEET C603)
- (D2) PROPOSED UNDERGROUND DETENTION BASIN. CONTECH 7' DIA. POLYMER COATED PERFORATED CMP (SEE DETAILS SHEET C607).
- (D3) RESTRICTOR AND OVERFLOW STRUCTURE
- (D4) REMOVE AND REPLACE EXISTING STORM STRUCTURE TO ALLOW FOR PROPOSED CONNECTION.
- (D5) CONCRETE COLLAR (NOT TO SCALE, SEE DETAIL, SHEET C601)
- (D6) TRENCH DRAIN (SEE DETAIL SHEET C602)
- (D7) CONNECT UNDERGROUND DETENTION SYSTEM TO EXISTING 18" RCP CULVERT (SEE C607)

6-INCH PERFORATED HDPE SUBSURFACE DRAIN

S - SANITARY SEWER

- (S1) 6" PVC SANITARY LATERAL @ 1.04% MIN. SLOPE. CLEANOUTS ARE REQUIRED EVERY 100-FEET.
- (S2) GREASE TRAP (SEE DETAIL, SHEET C606)

W - WATER / FIRE PROTECTION

- (W1) 6" DIP WATER MAIN
- (W2) FIRE HYDRANT W/ 6" MJ GATE VALVE
- (W3) 6" DIP WATER MAIN TO FIRE DEPARTMENT CONNECTION (FDC)
- (W4) 4" WATER MAIN DOMESTIC SERVICE CONNECTION (COORDINATE FINAL SIZING W/ MEP PLANS)
- (W5) POST INDICATOR VALVE
- (W6) FIRE DEPARTMENT CONNECTION PER CARMEL FIRE STANDARDS
- (W7) CONNECT TO EXISTING 6" WATER MAIN W/ 6" X 6" X 6" MJ TEE W/ THRUST BLOCK
- (W8) 6" DIP FIRE SERVICE LINE
- (W9) 4" MJ GATE VALVE
- (W10) 6" X 6" X 6" MJ TEE W/ THRUST BLOCK
- (W11) 6" X 6" X 4" MJ TEE W/ THRUST BLOCK
- (W12) 6" MJ 45° BEND W/ THRUST BLOCK
- (W13) 4" MJ 90° BEND W/ THRUST BLOCK
- (W14) 6" MJ GATE VALVE

T - TELECOM

- (T1) FIBER OPTIC & CABLE LINES (BY OWNER)

G - GAS

- (G1) GAS CONNECTION. COORDINATE WITH UTILITY OWNER.

E - ELECTRIC

- (E1) ELECTRIC SERVICE LINE. CONTRACTOR TO PROVIDE 4-INCH PVC SCHEDULE 40 CONDUIT TO TRANSFORMER
- (E2) TRANSFORMER TO BE INSTALLED BY THE UTILITY PROVIDER
- (E3) TRANSFORMER PAD TO BE CONSTRUCTED BY SITE CONTRACTOR IN ACCORDANCE WITH UTILITY PROVIDER SPECIFICATIONS.

PROPOSED LINETYPES LEGEND

- C.O. STORM SEWER CLEANOUT
- STORM SEWER PIPE
- C.O. SANITARY CLEANOUT
- SANITARY LATERAL
- G GAS LINE
- RD ROOF DRAIN
- W WATER LINE
- SWALE
- T UNDERGROUND CABLE
- TREE PROTECTION FENCE
- SUBSURFACE DRAINS (STRUCTURES)

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CARMEL, INDIANA

Scope Drawings:

These drawings indicate the general scope of the project in terms of architectural design concept, the dimensions of the building, the major architectural elements and the type of structural, mechanical and electrical systems.

The drawings do not necessarily indicate or describe all work required for the performance and completion of the requirements of the Contract.

On the basis of the general scope indicated or described, the trade contractors shall furnish all items required for the proper execution and completion of the work.

Revisions:

Rev. #	Revision Description	Issue Date
1	TAC COMMENTS	12/20/2019

Issue Date	Drawn By	Checked By
11-19-19	SO	MK

Drawing Title:

OVERALL
UTILITY PLAN

Certified By:

PAUL M. NASHERT
REGISTERED
No. 11500626
STATE OF INDIANA
PROFESSIONAL ENGINEER

Drawing Number:

C501

Project Number:

18094

Z:\2019\19012L - CSO, CARMEL ELEMENTARY SCHOOLS (18/82)\DWGS\C-501-UTILITY PLAN.DWG plotted by STEVEN O'ROURKE on 12/19/2019 5:40:21 PM last saved by SOROURKE on 12/19/2019 5:39:48 PM
Xrefs: X36X24E.DWG & 19012L BASE TOPO.DWG & 19012L BASE SITE.DWG & CONTEXT-BASE.DWG