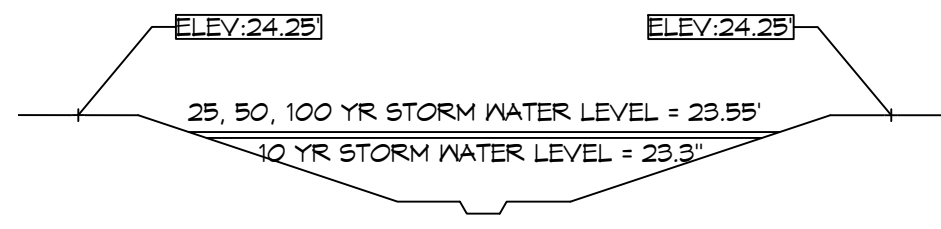


**GENERAL SITE DRAINAGE NOTES**

- CONTRACTOR SHALL COMPLY WITH THE STORMWATER POLLUTION PREVENTION PLAN.
- ALL STORMWATER PIPING SHALL BE SDR 35 POLYVINYL CHLORIDE PLASTIC PIPE, MEETING ASTM D 3034. DRAIN PIPE(S) SHALL BE THE BELL AND SPIGOT TYPE WITH 10" RING RUBBER GASKETS. THE BELLS OF THE PIPES SHALL BE LAID UPSTREAM. ALL JOINTS SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. ALL PIPES SHALL REQUIRE 12" COMPACTED SAND OR LIMESTONE BEDDING. ELEVATIONS SHOWN ARE MSL.
- FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
- THE PERIMETER OF THE PROJECT PROPERTY SHALL BE GRADED SUCH THAT NO RUNOFF IS DISCHARGED TO ADJACENT LOT(S).
- CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION PRIOR TO PLACING EQUIPMENT, PERSONNEL OR STARTING WORK ON NEIGHBORING PROPERTIES.

NOTE: TOP OF POND ELEVATION SET BY DRAINAGE OVERFLOW ELEVATION 23.55' + 0.7' FREEBOARD ABOVE OVERFLOW.



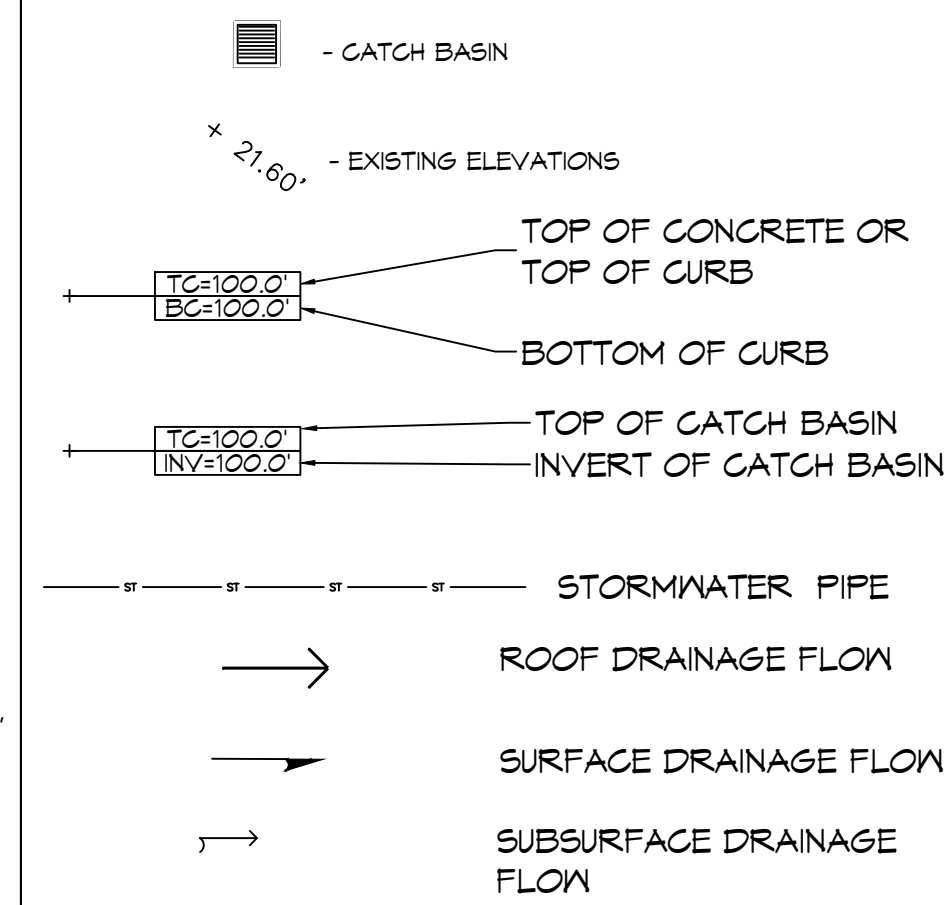
**DETENTION CALCULATIONS**

- STORM WATER OVERFLOW IS SET FOR AN ELEVATION OF 23.55'.
- 4 SECTIONS OF THE POND WERE MEASURED AND THE AVERAGE AREA WAS THEN MULTIPLIED BY THE LENGTH OF THE BASE OF THE POND TO MEASURE ITS CAPACITY ((54.12 s.f. + 46.15 s.f. + 30.73 s.f. + 31.56 s.f.)/4) x 84.0 ft = 3,615.0 ft<sup>2</sup>. THE EASTERN END OF THE POND MEASURES 10.20 s.f. x 10 ft OF BASE = 102.0 ft<sup>2</sup>. THE WESTERN END OF THE POND MEASURES 23.35 s.f. x 5 ft OF BASE = 116.75 ft<sup>2</sup>.
- STORM WATER DRAIN PIPE USED IN THIS PROJECT IS 12" Ø PIPE. THE AREA OF 12" Ø PIPE IS (π x 0.5<sup>2</sup>) = 0.785 s.f. THIS PROJECT HAS A TOTAL LENGTH OF 210 LINEAR FEET OF 12" Ø PIPE, WHICH DURING A 25 YEAR STORM EVENT WOULD COMPLETELY FILL ALL OF THE PIPES. (NOTE THIS LENGTH OF PIPE DOES NOT INCLUDE OUTFALL PIPE TO THE EXISTING CATCH BASIN. NOT ALL PIPE REMAINS COMPLETELY ROUND AFTER CONSTRUCTION, ONLY APPROXIMATELY 80% CAN BE USED FOR DETENTION. THEREFORE 0.785 s.f. x 210 LINEAR FEET x 80% = 136.9 ft<sup>2</sup>).
- DURING A 25 YEAR STORM NEITHER CATCH BASIN NORTH OF THE NEW BUILDING WILL OVERFLOW, HOWEVER THE CATCH BASIN WEST OF THE NEW BUILDING HAS A TOP OF GRATING AT 23.30' AND THE OVERFLOW IS SET FOR AN ELEVATION OF 23.55', THE AREA OVER THE TOP OF THIS CATCH BASIN WAS MEASURED AT 10.83 s.f. AND THE DRIVE IS 24 FT WIDE. THIS STORAGE IS ESTIMATED AT 10.83 s.f. x 24' = 259.9 ft<sup>2</sup>.
- TOTAL DETAINED WATER ON THIS SITE FOR A 25 STORM EVENT = (3,615.0 ft<sup>2</sup> + 102.0 ft<sup>2</sup> + 116.75 ft<sup>2</sup>) + 136.9 ft<sup>2</sup> + 259.9 ft<sup>2</sup> = 4,207 ft<sup>2</sup>.
- TOTAL REQUIRED DETENTION = 4,034 ft<sup>2</sup>.

**GRADING NOTES**

- GC SHALL REMOVE EXISTING NEAR SURFACE TOPSOIL WITH ORGANICS AND OTHER DELETERIOUS MATERIALS, APPROXIMATELY 6 INCHES, HOWEVER SINCE CONSTRUCTION OF THE EXISTING BUILDING MANY RUTS AND PONDING HAS OCCURRED IN THE PAVING AREAS. THE EXPOSED SUBGRADE IN THE DRIVE LANES AND PARKING AREAS SHALL BE PROOF-ROLLED WITH A RUBBER Tired VEHICLE WEIGHING ABOUT 20 TONS; PROOF-ROLLING SHALL BE MONITORED AND ANY SOILS WHICH ARE OBSERVED TO RUT OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD SHOULD BE UNDERCUT AND REPLACED WITH COMPACTED STRUCTURAL FILL.
- THE STRUCTURAL FILL SHALL BE SELECT GRANULAR MATERIAL FREE OF ORGANIC OR OTHER DELETERIOUS MATERIALS WITH A LIQUID LIMIT LESS THAN 40 AND A PLASTICITY INDEX BETWEEN 10 & 10 PERCENT. FILL SHALL BE PLACED IN MAXIMUM LIFTS OF SIX (6) INCHES OF LOOSE MATERIAL, COMPACTED TO AT LEAST 95 PERCENT OF THE FILL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698. IN-SITU TEST SHALL BE PERFORMED TO VERIFY MOISTURE CONTENT OF EACH LIFT. IF WATER MUST BE ADDED, IT SHALL BE UNIFORMLY APPLIED AND THOROUGHLY MIXED INTO THE SOIL BY DISKING OR SCARIFYING. IN-PLACE DENSITY MEASUREMENTS SHALL BE TAKEN TO ASSURE THAT THE ABOVE DEGREE OF COMPACTION IS ACHIEVED.
- A MINIMUM OF 6" OF COMPACTED FILL MATERIAL SHALL BE PROVIDED FOR ALL PAVING.
- PROVIDE AND MAINTAIN IMMEDIATE SITE DRAINAGE BEFORE, DURING, AND AFTER CONSTRUCTION. PROVIDE GRADING, SWELLS, AND SUMP PUMPS AS MAY BE REQUIRED TO IMMEDIATELY DRAIN ALL RAINWATER FROM THE CONSTRUCTION AREA. EXCAVATIONS SHOULD BE OBSERVED AND CONCRETE PLACED AS QUICKLY AS POSSIBLE TO AVOID EXPOSURE OF THE EXCAVATIONS BOTTOMS TO WETTING AND DRYING. SURFACE RUNOFF WATER SHOULD BE DRAINED AWAY FROM THE EXCAVATIONS AND NOT BE ALLOWED TO POND PRIOR OR AFTER CONCRETE PLACEMENT. IF IT IS REQUIRED THAT AN EXCAVATION BE LEFT OPEN FOR MORE THAN ONE DAY, THEY SHOULD BE PROTECTED TO REDUCE EVAPORATION OR ENTRY OF MOISTURE.

**SITE LEGEND**



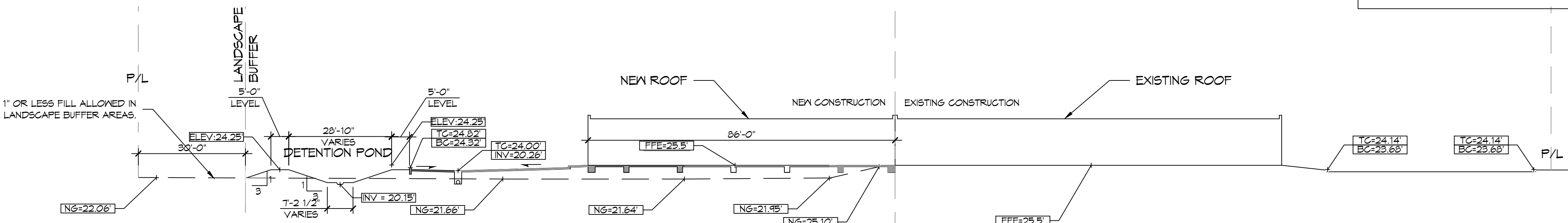
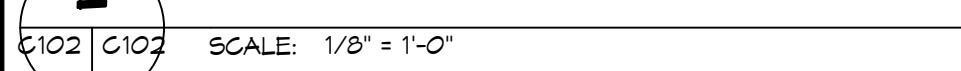
**DRAINAGE ABBREVIATIONS**

TC	TOP OF CATCH BASIN OR TOP OF CURB
BC	BOTTOM OF CURB
INV	INVERT

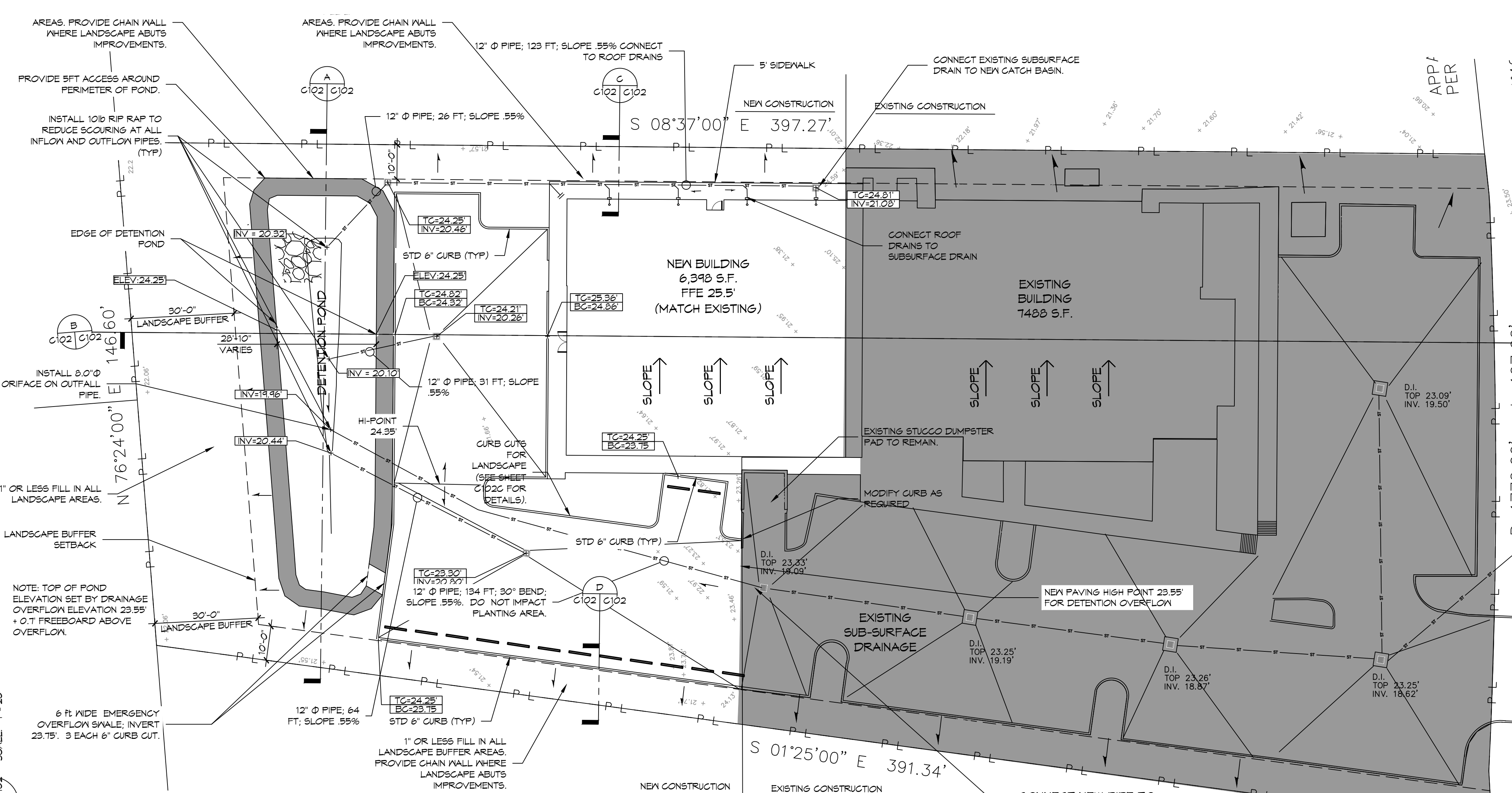
**DETENTION POND PROFILE**

**WESTERN PARKING AREA PROFILE**

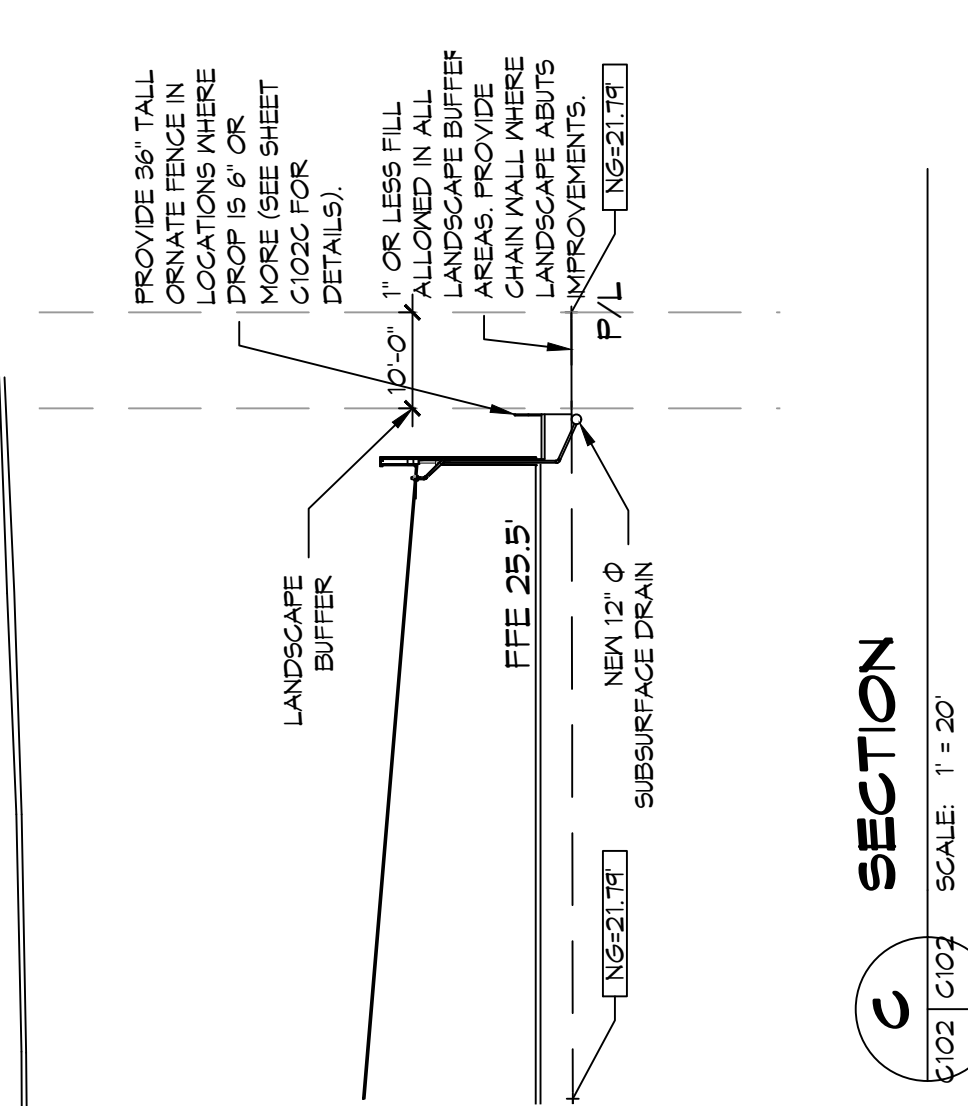
**STORM WATER LEVELS PROFILE DURING EVENT STORMS**



**SECTION B** SCALE: 1" = 20'



**SECTION C** SCALE: 1" = 20'



**SECTION D** SCALE: 1" = 20'

**8 SITE GRADING AND DRAINAGE PLAN**

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Chief Engineer: Brian Mistich, PE  
554 Old Spanish Trail  
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#	DESCRIPTION	DATE
1	Revised Detention Pond	6/30/2022



**NEW ADDITION**  
**HONTASMOB**

SHEET TITLE:  
SITE GRADING AND POST DRAINAGE PLAN

DRAWING NUMBER:  
**C102B**

SHEET No: 5 of 22

DATE: 6-15-2022  
JOB No: 2443  
DRAWN BY: PDP  
CHECKED BY: GKD