

**GRADING/EROSION CONTROL NOTES:**

- THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COSTS HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE, OTHER OBSTACLES OR ANY DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NON-SUBSCRIBING UTILITIES. THE CONTRACTOR(S) SHALL CONTACT "NORTH CAROLINA ONE CALL" AT 1-800-632-4949 FOR ASSISTANCE IN LOCATING EXISTING UTILITIES. CALL AT LEAST 48 HOURS PRIOR TO ANY DIGGING.
- THE EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO ANY EARTHWORK.
- ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.
- ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED AND REPAIRED AT A MINIMUM OF WEEKLY BASIS AND AFTER EVERY RAIN EVENT.
- ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LOADED RUNOFF TO ANY STORM DRAINAGE SYSTEM.
- ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THE CONSTRUCTION ENTRANCES.
- THE APPROXIMATE AREA OF THE LIMITS OF CLEARING, GRADING AND CONSTRUCTION IS 2.56 ACRES.
- PROVIDE A GROUND COVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES WITHIN 14 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING FOR ANY DISTURBED AREAS AND 7 CALENDAR DAYS FOR ANY STEEP SLOPES > 3:1 AND PERIMETER AREAS.
- ALL CUT AND FILL SLOPES AND CHANNEL SIDESLOPES WHICH ARE NOT TO BE PAVED, SHALL BE SEEDING UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE WITH:
  - 100 LBS PER 1,000 SQUARE FOOT GROUND LIMESTONE OR EQUIVALENT. NO SOIL TEST REQUIRED FOR INITIAL ESTABLISHMENT.
  - 20 LBS OF 10-10-10 FERTILIZER OR EQUIVALENT PER 1,000 SQUARE FOOT.
  - VARIETIES TO BE SEED:
    1. SPRING SEEDING: MARCH 1 - APRIL 30; SPRING OATS 2.5 LBS PER 1,000 SQUARE FOOT.
    2. SUMMER SEEDING: MAY 1 - AUGUST 1; WHEAT OR GRASS AT 2 OZ. PER SQUARE FOOT MIXED WITH 1 BUSHEL OF SAWDUST FOR UNIFORM SEEDING.
    3. ASPHALT MULCH 8 GALLONS PER 1,000 SQUARE FOOT. ALL SEEDING WILL BE MULCHED.
- ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR AT GROUND BREAK.

**MAINTENANCE NOTES:**

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED AND MAINTAINED DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5 INCHES. ANY SEDIMENT THAT HAS BEEN TRANSPORTED BEYOND THE PROJECT LIMITS SHALL BE REMOVED. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

**CONSTRUCTION ENTRANCE:**

INSPECT CONSTRUCTION ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE. TOP DRESS WITH NEW GRAVEL AS NEEDED. CHECK ROAD DITCHES AND OTHER SEEDED AREAS FOR EROSION AND SEDIMENTATION AFTER RUNOFF-PRODUCING RAINS. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. SEDIMENT PRODUCING AREAS SHOULD BE TREATED IMMEDIATELY.

**SILT FENCE:**

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

**SILT FENCE GRAVEL OUTLET:**

INSPECT SEDIMENT FENCE GRAVEL OUTLETS AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. ANY RIP RAP DISPLACED MUST BE REPLACED IMMEDIATELY.

**OUTLET STABILIZATION STRUCTURE:**

INSPECT RIP RAP STRUCTURES WEEKLY AND AFTER SIGNIFICANT (0.5 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

**BLOCK AND GRAVEL INLET PROTECTION:**

INSPECT THE BARRIER OF AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

**SEDIMENT TRAP:**

INSPECT TEMPORARY SEDIMENT TRAPS AT LEAST WEEKLY AND AFTER RAINFALL EVENTS 0.5 INCHES OR MORE. REMOVE SEDIMENT AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT.

CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIP RAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.

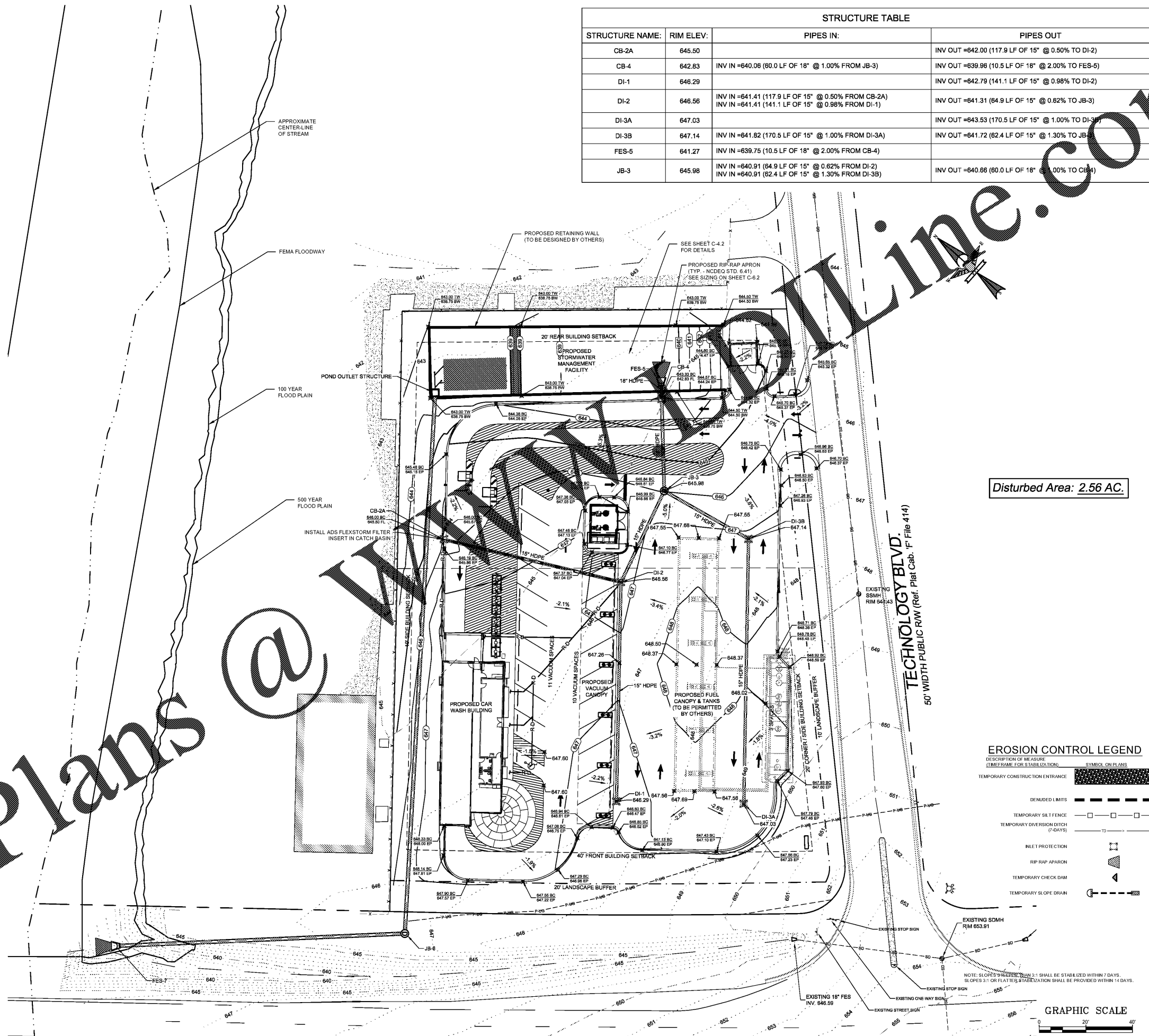
**CONSTRUCTION SEQUENCE:**

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

- OBTAIN A LAND DISTURBING PERMIT. SCHEDULE A PRE-CONSTRUCTION MEETING.
- INSTALL GRAVEL CONSTRUCTION PAD IF REQUIRED, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT TRAPS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. CONTRACTOR SHALL BEGIN WITH SEDIMENT FENCING AND ALL OTHER SEDIMENT CONTAINMENT DEVICES FOLLOWED BY ALL DIVERSION AND BY-PASS DITCHES/BERMS.
- ONCE EROSION CONTROL MEASURES HAVE BEEN APPROVED BY INSPECTOR BEGIN DEMOLITION AND GENERAL EXCAVATION ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PHASE/STAGE EROSION CONTROL TO ALLOW FOR CONSTRUCTION.
- NOTE: CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION DEVICES AT LEAST ONCE A WEEK AND AFTER EVERY RAINFALL. GRADING ACTIVITY SHALL BE PROHIBITED IN THE AREAS OF THE SEDIMENT CONTROL DEVICES/SEDIMENT TRAPS UNTIL THE AREAS UPSTREAM OF THESE DEVICES HAVE BEEN STABILIZED AND APPROVED.
- STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDE AREAS WITHIN FOURTEEN (14) CALENDAR DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION.
 

NOTE: THE CONTRACTOR SHALL ENSURE THAT THE EROSION CONTROL DEVICES REMAIN UNDISTURBED DURING CONSTRUCTION OF THE BUILDING PADS AND ADJACENT PARKING/DRIVE AREAS ADJACENT TO THESE DEVICES UNTIL THE CONTRIBUTING UPSTREAM AREAS HAVE BEEN STABILIZED AND APPROVED.
- WHEN SITE IS APPROVED BY INSPECTOR REMOVE TEMPORARY DIVERSIONS, SILT FENCING, SEDIMENT BASINS, ETC., AND SEED OUT TO AVE ANY RESULTING BARE AREAS.

STRUCTURE TABLE			
STRUCTURE NAME:	RIM ELEV:	PIPES IN:	PIPES OUT
CB-2A	645.50		INV OUT =642.00 (117.9 LF OF 15" @ 0.50% TO DI-2)
CB-4	642.83	INV IN =640.06 (60.0 LF OF 18" @ 1.00% FROM JB-3)	INV OUT =639.96 (10.5 LF OF 18" @ 2.00% TO FES-5)
DI-1	648.29		INV OUT =642.79 (141.1 LF OF 15" @ 0.98% TO DI-2)
DI-2	646.56	INV IN =641.41 (117.9 LF OF 15" @ 0.50% FROM CB-2A) INV IN =641.41 (141.1 LF OF 15" @ 0.98% FROM DI-1)	INV OUT =641.31 (64.9 LF OF 15" @ 0.62% TO JB-3)
DI-3A	647.03		INV OUT =643.53 (170.5 LF OF 15" @ 1.00% TO DI-3B)
DI-3B	647.14	INV IN =641.82 (170.5 LF OF 15" @ 1.00% FROM DI-3A)	INV OUT =641.72 (62.4 LF OF 15" @ 1.30% TO JB-3)
FES-5	641.27	INV IN =639.75 (10.5 LF OF 18" @ 2.00% FROM CB-4)	
JB-3	645.98	INV IN =640.91 (64.9 LF OF 15" @ 0.62% FROM DI-2) INV IN =640.91 (62.4 LF OF 15" @ 1.30% FROM DI-3B)	INV OUT =640.66 (60.0 LF OF 18" @ 1.00% TO CB-4)



Disturbed Area: 2.56 AC.

TECHNOLOGY BLVD.  
50' WIDTH PUBLIC R/W (Ref. Plat Cab. 1<sup>st</sup> File 414)

**EROSION CONTROL LEGEND**

- DESCRIPTION OF MEASURE (TYPE FRAME FOR STABILIZATION) SYMBOLS OR PLANS
- TEMPORARY CONSTRUCTION ENTRANCE
  - DEMUDED LIMITS
  - TEMPORARY SILT FENCE
  - TEMPORARY DIVERSION DITCH (7-DAYS)
  - INLET PROTECTION
  - RIP RAP APRON
  - TEMPORARY CHECK DAM
  - TEMPORARY SLOPE DRAIN

GRAPHIC SCALE  
( IN FEET )  
1 inch = 20 ft.

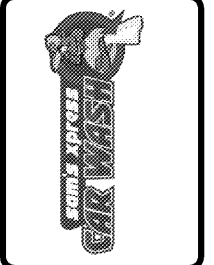
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**GRADING, DRAINAGE, & EROSION CONTROL PHASE 2 PLAN**

DESIGNED BY	JLR	CHECKED BY	JHR
DRAWN BY	JAR	DATE	07/05/17
SCALE	AS SHOWN	JOB NUMBER	5558

Sheet  
**C-4.1**