**Underground Stormwater Management Facility Plan Review Checklist**

**Sediment control Permit No.__________________**

**SUPPORTING INFORMATION**  (One Copy)

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- Maintenance Easement and Covenant Documents
- Itemized Stormwater Management Construction Estimate.
- Storm drain plans and computations for storm drains leading to the underground facility.

**STORMWATER MANAGEMENT COMPUTATIONS**  (One Copy)

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- RCN determinations for CP, ultimate development (any existing developed off-site areas considered as existing condition).
- Stormwater Management provided for one half of contiguous rights-of-way or planned non-state roads, and new construction within state road rights-of-way.
- Time of Concentration ($T_c$) for CP computations: ultimate development (same policy on existing off-site areas as RCN determination).
- Elevation-storage computations.
- Elevation-discharge computations (provide equations and site references).

**STORMWATER MANAGEMENT PLAN**  (One Copy)

**A. PLAN VIEW OF FACILITY AT SCALE OF 1\" = 50' OR LESS (40', 30', ETC.)**

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- Existing and final contours (1' or 2' interval)
- Existing and proposed improvements.
- Delineation of outfall or downstream storm drain, control structure, storage facility and entire storm drain system.
- Facility and manhole location to allow easy access and maintenance.
- Outflow pipe, outlet protection (detail required), outfall channel.
- Existing and proposed utility locations.
- Maintenance access from public right-of-way, minimum width 12’, maximum grade 15% - mechanically stabilized, 10% maximum without mechanical stabilization.
- Maintenance easement (shall include: storage chamber, control structure, outfall, any related appurtenances, access points, minimum width allowance for repair work. Minimum 10-foot clearance around the facility.
B. PROFILE OF ENTIRE SYSTEM AND ASSOCIATED DETAILS

1. GENERAL ITEMS

Only pipes and concrete vaults allowed for storage chambers.
Circular pipes only.
All slopes, inverts, and dimensions.
Minimum 48” height of storage chamber and cross-overs.
Gage and corrugation size for metal pipe. Minimum 14 gauge.
Silt tight pipe or storage chamber.
Coupling band detail.
Grated, vented manholes on upstream and downstream ends of storage chamber for access, cleaning, and venting.
Maximum of 100’ chamber length between manhole access points.
For metal pipe, add note that the pipe ends must be matched and numbered, from the manufacturer.
Concrete manholes must be used at all HDPE pipe connections.

3. CONTROL STRUCTURE (DETAILS REQUIRED)

Cast in place reinforced concrete only
Plan view with top slab removed.
Cross-sections each direction.
Top slab reinforcing detail.
Reinforcing details.
Submit copy of structural computations.
Weir crest and CpV and 10-year water surface elevations.
Orifice dimensions and location.
Orifice trash rack.
Protective coating for exposed metals.
Manhole access to both sides.
Maximum manhole step spacing of one foot on center. Access ladders must be used.

3. OUTFALL PROTECTION (DETAIL REQUIRED)

Size for 10-year storm – use SCS methodology.
Cross-section at end of channel in accordance with receiving section.
Outfall dimensions.
Slope – 0%
Median riprap size ($d_{50}$).

Thickness ($2.0 \times d_{50}$)

Approved filter cloth.

C. **MISCELLANEOUS ITEMS**

Inspector Checkoff List / Sequence of Construction

Stormwater Management Construction Specifications and General Notes.

Water quality considerations and construction runoff protection.

Loadings for structural design specified on plan (H-20 for vehicular travel areas).

Sealed by P.E. (Structural P.E. also where required) with signature and date.

9/8/09