

Background / Regulatory Requirements

This Chapter summarizes the impacts of development on stormwater quality and quantity and explains the post-construction stormwater control requirements for development projects.

2.1 Stormwater Issues in Developed Areas

Throughout the country, stormwater runoff is a leading source of pollutants for water bodies that fail to meet water quality standards¹. In the San Francisco Bay watershed, urban and agricultural runoff is currently considered to be the **largest source of pollutants** to aquatic systems.² Although stormwater runoff is part of the natural hydrologic cycle, human activities can alter natural drainage patterns, introduce pollutants, and increase erosion, degrading natural habitats.

¹ USEPA, <https://www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution>

² San Francisco Bay Regional Water Quality Control Board, Basin Plan, 2004.
https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html

2.1.1 Stormwater Runoff in a Natural Setting

The natural water cycle circulates the earth's water from sky, to land, to sea, to sky in a never-ending cycle. In a pristine setting, soil consists of a complex matrix of mulch, roots and pores that absorb rainwater.

As **rainwater infiltrates slowly into the soil**, natural biologic processes remove impurities. Because most rainstorms are not large enough to fully saturate the soil, only a small percentage of annual rainfall flows over the surface as runoff. The

natural vegetation tends to slow the runoff and maintain a sheet flow condition, allowing suspended particles and sediments to settle. In the natural condition, the hydrologic cycle creates a stable supply of groundwater, and surface waters are naturally cleansed of impurities. Sediment is carried with the flow of stormwater runoff, but in a natural setting, creeks typically find an equilibrium in which sediment inflow to a given reach of stream generally equals sediment outflow from that reach.

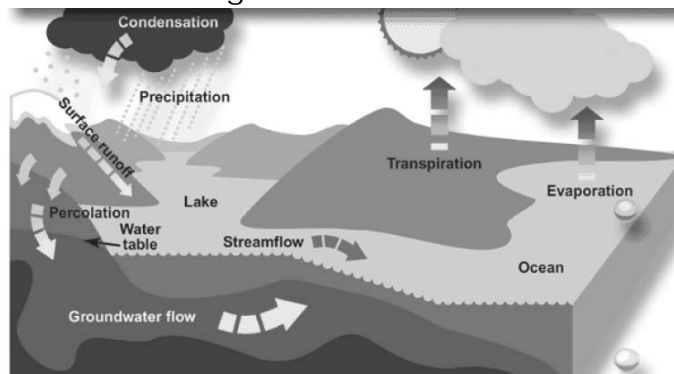


Figure 2-1: The Water Cycle (NGRDC/GDNR, 2005/06)

2.1.2 Stormwater Runoff in Urban or Urbanizing Areas

In developed areas, impervious surfaces – such as roads, parking lots and rooftops – prevent water from infiltrating into the soil. **Most of the rainfall remains on the surface**, where it washes debris, dirt, vehicle fluids, chemicals, and other pollutants into the local storm drain systems. Once in the storm drain, polluted runoff flows directly into creeks and other natural bodies of water. Figure 2-2 contrasts the percentage of rainfall that becomes stormwater runoff in a natural vs. an urban setting.

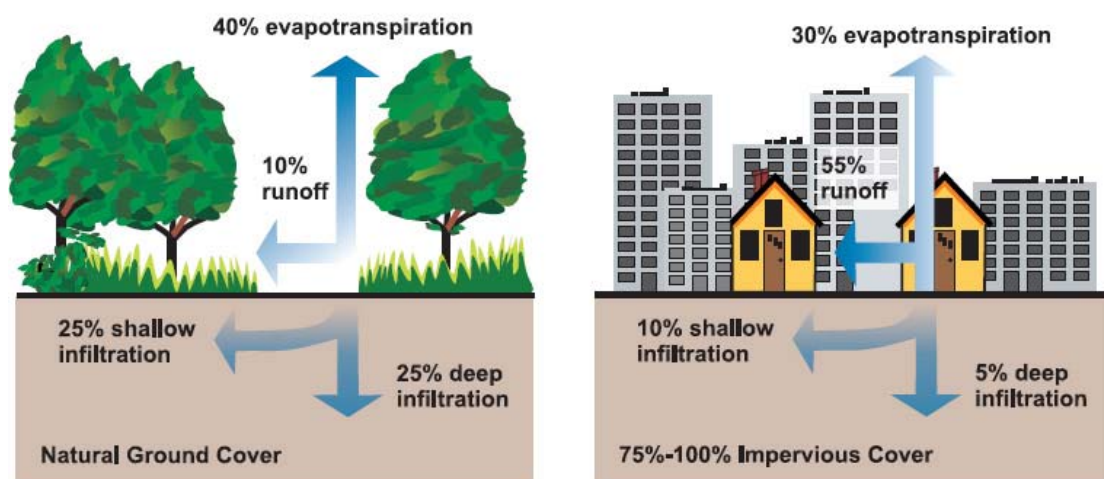


Figure 2-2: Change in volume of stormwater runoff after development. (adapted from USEPA, 2003)

Not only does urban stormwater runoff **wash pollutants into local waterways**, but it can also cause natural creek channels to erode. When impervious surfaces are built, rainwater runs off at **faster rates and in larger volumes** than in the natural condition. This effect is called hydrograph modification or hydromodification. Natural creek channels must suddenly handle much greater volumes of water traveling at much faster rates, greatly increasing the duration of erosive forces on their bed and banks. In response to these changes, creek channels enlarge by eroding and may also become less stable. Figures 2-3 and 2-4 contrast creek channels in the natural condition and creek channels subject to the effects of hydromodification.

2.2 Post-Construction Stormwater Controls

Various permanent control measures have been developed in order to **reduce the long-term impacts** of development on stormwater quality and creek channels. These permanent control measures are often called post-construction stormwater controls, low impact development (LID) techniques, or post-construction best management practices (BMPs) to distinguish them from the temporary construction BMPs that are used to control sedimentation, erosion, and pollutants while a project is being constructed. **LID techniques** reduce water quality impacts of development by preserving and re-creating natural landscape features, minimizing imperviousness, and infiltrating, storing, detaining, evapotranspiring (evaporating stormwater into the air directly or through plant transpiration), and/or biotreating stormwater runoff close to its source, or onsite.



Figure 2-3: Creek with Natural Banks



Figure 2-4: Creek Impacted by Hydromodification

Post-construction stormwater control measures can be divided into four categories: site design measures, source control measures, stormwater treatment measures, and hydromodification management measures. Each of these categories is described below.

2.2.1 Site Design Measures

Site design measures are **site planning techniques** that help reduce stormwater pollutants and lessen increases in the peak runoff flow and volume, by protecting existing natural resources and reducing impervious surfaces of development projects. Some examples of site design measures include:

- Minimize land disturbance and preserve high-quality open space;
- Minimize impervious surfaces by using narrow streets, driveways and sidewalks or construct them with pervious paving;
- Minimize impervious surfaces that are directly connected to the storm drain system by routing runoff to landscaped areas;
- Cluster structures and paved surfaces; and
- Use landscaping as a drainage feature.

2.2.2 Source Control Measures

Source control measures consist of either structural project features or operational “good housekeeping” practices that **prevent pollutant discharge and runoff** at the source and keep pollutants from coming into contact with stormwater. Examples of structural source controls include:

- Roofed trash enclosures;
- Berms that control run-on to or runoff from a potential pollutant source; and
- Connecting areas used for washing equipment such as floor mats and storage racks to the sanitary sewer. (Note that any sanitary sewer connections must be approved by the local permitting authority.)

Examples of operational source controls include:

- Marking storm drain inlets with a “No Dumping” message;
- Street or parking lot sweeping; and
- Regular inspection and cleaning of storm drain inlets.

2.2.3 Stormwater Treatment Measures

Stormwater treatment measures are engineered systems that are designed to **remove pollutants from stormwater** using processes such as filtration, infiltration, and sedimentation. Stormwater treatment measures must be sized to comply with one of the hydraulic design criteria listed in MRP Provision C.3.d, which are described in Section 5.1 of this handbook.

Stormwater treatment measures can be categorized as either **low impact development (LID) treatment measures** or non-LID. LID treatment measures are designed to mimic a site’s predevelopment hydrology and provide stormwater treatment close to sources of runoff. The MRP requires the use of LID treatment measures in private development and identifies acceptable LID treatment measures as rainwater harvesting and use, infiltration, evapotranspiration, and biotreatment.

Chapter 6 provides technical guidance specific to treatment measures listed in Table 2-1.

Table 2-1 Stormwater Treatment and Site Design Measures Described in Chapter 6		
	LID	Non-LID ³
Treatment Measures		
Bioretention areas	✓	
Flow-through planters	✓	
Tree well filters	✓ If biotreatment soils are used	✓ If biotreatment soils not used
Infiltration trench	✓	
Subsurface infiltration system	✓	
Rainwater harvesting and use	✓	
Media filter		✓
Extended detention basins		✓
Site Design Measures		
Green roofs	✓	
Pervious pavement	✓	
Grid pavements	✓	

For very limited types of urban infill, high density and affordable housing development, referred to as “Special Projects,” use of non-LID tree well filters and media filters may be allowed. (See Section 2.3.3 and Appendix J for more information on Special Projects.) Extended detention basins cannot be used as stand-alone treatment measures for any project.

2.2.4 Hydromodification Management Measures

If a project will be increasing the amount of impervious surface on the site, compared to the pre-project condition, and is located in the drainage area to a creek that is susceptible to erosion, the project may need to implement hydromodification management (HM) measures, either on-site, off-site, or within the creek channel. HM measures include site design, hydrologic source control, and treatment measures that promote infiltration or otherwise ***minimize the change in the peak flow, volume and duration of runoff***, when compared to the pre-project condition. HM measures may also include constructed facilities (such as basins, ponds, or vaults) that manage the flow rates and volumes of stormwater leaving a site (or from several sites that discharge to a regional facility), and under some conditions may also include re-engineering of at-risk channels downstream from the site. In some cases, a single stormwater control measure may be used to meet both the LID treatment and HM requirements for a project. More information on applicability and sizing of HM controls is provided in Chapter 7.

³ Starting December 1, 2011, non-LID treatment measures are not allowed as stand-alone treatment (unless allowed in Special Projects), but non-LID treatment measures may be included as part of a “treatment train” (see Section 5.6).

2.3 Municipal Stormwater Permit Requirements

The development or redevelopment of a property represents an opportunity to incorporate post-construction controls that can reduce water quality impacts of the development over the life of the project. Since 2003, the Urban Runoff Program's municipal agencies have required new development and redevelopment projects to incorporate post-construction stormwater site design, source control, and treatment measures in their projects. Since 2005, the hydromodification management measures have been required as well, where applicable. Beginning December 1, 2011, new development and redevelopment projects have been required to incorporate LID-based post-construction stormwater control measures.

The Municipal Regional Stormwater Permit (MRP), reissued by the San Francisco Bay Regional Water Quality Control Board in May 2022, includes requirements for incorporating LID-based post-construction stormwater control measures into new development and redevelopment projects. These requirements are included in Provision C.3 of the MRP (Order No. R2-2022-0018, as amended by Order No. R2-2023-0019)⁴. Changes to the C.3 requirements took effect on July 1, 2023.

2.3.1 Do the C.3 Requirements Affect My Project?

Provision C.3.b establishes thresholds of impervious surface created and/or replaced at which new development and redevelopment projects must comply with Provision C.3. Projects that meet or exceed these thresholds are called **Regulated Projects**. Provision C.3 also states that "all projects, regardless of size should be encouraged to incorporate appropriate source control and site design measures". Thus, municipalities may include standard **stormwater conditions of approval** as needed for all projects that receive development permits. These conditions of approval may require site design and source control measures as appropriate.

Regardless of a project's need to comply with Provision C.3, municipalities may apply standard **stormwater conditions of approval** to projects that receive development permits.

REGULATED PROJECTS

The thresholds for determining whether Provision C.3 applies to a project are based on the amount of impervious surface that is created and/or replaced⁵ by a project, as described below. Beginning July 1, 2023, the following types of projects are Regulated Projects.

- Public and private projects that create and/or replace **5,000 square feet or more** of impervious surface on a parcel, including portions of the public right of way that are developed or redeveloped as part of the project.

⁴ See https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/

⁵ Replaced impervious area includes hardscape or roof area installed on an area of a site that was previously impervious, even if the type of impervious surface changes. It also includes the removal and replacement of an asphalt or concrete pavement, to base course or lower, or repairing the pavement.

- Large detached single-family home projects that create and/or replace **10,000 square feet or more** of impervious surface and are not part of a larger development or redevelopment plan, including portions of the public right of way that are developed or redeveloped as part of the single-family home project.
- New public and private road projects that create and/or replace **5,000 square feet or more** of impervious surface. This includes construction of new roads (and associated bike lanes and sidewalks) and widening of existing public and private roads with additional travel lanes.
- Construction of impervious trails that create and/or replace **5,000 square feet or more** of impervious surface and are greater than or equal to 10 feet wide or are creek-side (within 50 feet of the top of bank).
- Public works projects in the right-of-way, such as sidewalk gap closures, sidewalk section replacement, and ADA curb ramps, that create and/or replace **5,000 contiguous square feet** or more of impervious surface.
- The following pavement maintenance practices associated with parcel-based projects (e.g., renovation of existing public/private parking lots and other pavement projects) if they create and/or replace **5,000 square feet** or more of impervious surface.
 - Removing and replacing an asphalt or concrete pavement to the top of the base course or lower, or repairing the pavement base (including repair of the pavement base in preparation for bituminous surface treatment, such as chip seal);
 - Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders; and
 - Resurfacing by upgrading from dirt to gravel⁶, to a bituminous surface treatment (e.g., chip seal), to asphalt, or to concrete; or upgrading from gravel to a bituminous surface treatment, to asphalt, or to concrete.
- Projects involving **reconstruction of existing streets or roads**⁷ that create and/or replace **1 contiguous⁸ acre or more** of impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee. These include sidewalks and bicycle lanes that are built or rebuilt as part of the existing streets or roads, and utility trenching projects which are - on average, over the entire length of the project - greater than or equal to 8 feet wide.

Table 2-2 summarizes the requirements for Regulated Project types and thresholds. Table 2-3 summarizes included and excluded pavement maintenance practices.

⁶ Gravel is considered an impervious surface unless it is part of a pervious pavement system.

⁷ The definition of roads includes roads on levees.

⁸ Project areas interrupted by cross streets or intersections are considered contiguous.

Table 2-2
Summary of Regulated Project Types and Thresholds

Project Type/Description	Impervious Surface Threshold Criterion	Impervious Surface Threshold	Notes	Sub-provision
Parcel-Based Requirements				
Detached single-family home not part of a larger plan of development	Cumulative	10,000 SF	1, 2, 3	C.3.b.ii.(6)
Public/private development (e.g. new library on previously undeveloped site)	Cumulative	5,000 SF	1, 3	C.3.b.ii.(1), (2)
Public/private redevelopment project (e.g. renovated hospital)	Cumulative	5,000 SF	1, 3	C.3.b.ii.(3)
Renovation of existing public/private parking lots and other pavement (see applicable activities in Table 2-3)	Cumulative	5,000 SF	1, 3	C.3.b.ii.(1)
Roads, Sidewalks, and Trails				
New roads, including sidewalks and bicycle lanes	Contiguous	5,000 SF	1	C.3.b.ii.(4)
Adding traffic lanes to an existing road	Contiguous	5,000 SF	1	C.3.b.ii.(4)
New impervious trail projects ≥ 10 feet wide or ≤ 50 feet from creek bank	Contiguous	5,000 SF	1, 4	C.3.b.ii.(4)
Public works projects such as sidewalk gap closures, sidewalk replacement, and ADA curb ramps not associated with a parcel-based project	Contiguous	5,000 SF	1	C.3.b.ii.(3)
Road Maintenance Projects				
Reconstruction of existing roads, including sidewalks and bicycle lanes (see applicable activities in Table 2-3)	Contiguous	1 acre	1	C.3.b.ii.(5)
Utility trenching projects ≥ 8 feet wide (on average over the length of the project)	Contiguous	1 acre	1	C.3.b.ii.(5)

Notes:

- 1) Projects that fall under the planning and building authority of the Permittee.
- 2) Includes addition of an ADU within a lot.
- 3) "Project" includes any improvements in the public right of way associated with the project..
- 4) Sidewalks, bicycle lanes, and trails may be excluded if runoff is directed to a vegetated area.

Table 2-3 Applicability of Pavement Maintenance Activities	
Specific Activities	Included or Exempt
Upgrade from dirt to gravel (exempt if built to spec for pervious pavement)	Included
Upgrade from dirt/gravel to asphalt or concrete pavement (exempt if built to spec for pervious pavement)	Included
Removing/replacing asphalt or concrete to top of base course or lower	Included
Repair of pavement base (i.e. base failure repair)	Included
Extending roadway edge (e.g., lane widening or safety improvement)	Included
Paving gravel or dirt roadway shoulder	Included
Interior Remodels	Exempt
Repair of roof or exterior wall surface	Exempt
Pothole and square cut patching	Exempt
Overlay gravel on existing gravel	Exempt
Overlay asphalt or concrete on existing asphalt or concrete (no increase in area)	Exempt
Applying chip seal or cape seal to existing asphalt or concrete pavement (no increase in area)	Exempt
Upgrade from chip seal or cape seal to asphalt or concrete (no increase in area)	Exempt
Shoulder grading	Exempt
Reshaping/regrading drainage	Exempt
Crack sealing	Exempt
Pavement preservation that does not expand road prism	Exempt
Vegetation maintenance	Exempt

CALCULATING IMPERVIOUS SURFACE

An “impervious surface” is any material that ***prevents or substantially reduces infiltration of water into the soil.*** This includes building roofs, driveways, patios, parking lots, impervious decking, streets, sidewalks, and any other continuous watertight pavement or covering. Impervious surface is calculated in terms of square feet or, for larger sites, in acres. The area of building roofs includes not only the footprint of the main building or structure, but also garages, roof overhangs, and other accessory structures. Non-building related impervious surfaces include asphalt, concrete, and gravel. Pervious pavement underlain with pervious soil and pervious storage material, such as a gravel layer sufficient to hold at least the Provision C.3.d volume of rainfall runoff, is not considered an impervious surface.

The municipalities use a “C.3 Data Form” to help project applicants perform these calculations and determine whether or which C.3 provisions apply to their projects. ***Contact your local jurisdiction*** to obtain its C.3 Data Form or equivalent. More discussion of the contents of the C.3 Data Form is provided in Chapter 3.

EXCLUSIONS FOR PENDING PROJECTS

All projects that meet the descriptions of Regulated Projects in Provision C.3.b are required to implement LID source control, site design, and stormwater treatment requirements as described in Provisions C.3.c and C.3.d of the MRP. However, Provision C.3.b provides for grandfathering of projects that were approved under a previous municipal stormwater permit, have not yet been constructed, and meet specific criteria described as follows:

- Any Regulated Project that has been approved with stormwater treatment measures in compliance with Provision C.3.d (numeric sizing criteria) under a previous municipal stormwater permit is exempt from the requirements of Provision C.3.c (LID requirements) in the current MRP and may proceed with the approved treatment measures.
- Any Regulated Project that was approved with no Provision C.3 stormwater treatment measures under a previous municipal stormwater permit and has not begun construction by the July 1, 2023, is required to fully comply with the current requirements of Provisions C.3.c and C.3.d, unless:
 1. The project was previously approved with a vesting tentative map that confers a vested right to proceed with development in substantial compliance with the ordinance, policies, and standards in effect at the time the vesting tentative map was approved or conditionally approved, as allowed by State law; or
 2. The local agency has no legal authority to require changes to previously granted approvals for the project, e.g., the project has been granted a building permit.

An exemption from the LID requirements of Provision C.3.c. may be granted to this type of Regulated Project as long as stormwater treatment with media filters is provided that complies with the hydraulic sizing requirements of Provision C.3.d.

- Any pending Regulated Project that has not yet been approved as of June 30, 2023, and for which a Permittee has no legal authority to require new requirements under Government Code sections 66474.2 or 65589.5., subd. (o), is subject to the Provision C.3 requirements in the permit ("MRP 2.0") just preceding the current permit ("MRP 3.0"). These requirements are provided in Attachment I of MRP 3.0.

EXCLUSIONS FOR SPECIFIC TYPES OF PROJECTS

Provision C.3.c of the municipal stormwater permit excludes specific types of projects from Provision C.3 requirements, even if they meet the threshold requirements described above. The list of excluded project types is shown in Table 2-4.

Table 2-4 Projects Excluded from Provision C.3 Requirements	
Road and trail projects	<ul style="list-style-type: none"> ▪ Sidewalks built as part of new streets or roads and built to direct stormwater runoff to adjacent vegetated areas; ▪ Bicycle lanes built as part of new streets or roads, but that are not hydraulically connected to the new streets or roads and that direct stormwater runoff to adjacent vegetated areas; ▪ Impervious trails that direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees, where those areas are at least half as large as the contributing impervious surface area; ▪ Sidewalks, bicycle lanes, or trails constructed as pervious pavement systems; and ▪ Caltrans highway projects and associated facilities⁹.
Remodeling, repair or maintenance projects	<ul style="list-style-type: none"> ▪ Interior remodels; ▪ Routine maintenance or repair, such as roof or exterior wall surface replacement; or ▪ The following pavement maintenance practices: <ul style="list-style-type: none"> ▫ Pothole and square cut patching; ▫ Overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage; ▫ Shoulder grading; ▫ Reshaping/regrading drainage systems; ▫ Crack sealing; ▫ Pavement preservation activities that do not expand the road prism; ▫ Upgrading from a bituminous surface treatment (e.g., chip seal) with an overlay of asphalt or concrete, without expanding the area of coverage; ▫ Applying a bituminous surface treatment to existing asphalt or concrete pavement, without expanding the area of coverage; and ▫ Vegetation maintenance.

2.3.2 What is Required by Provision C.3?

Except for the excluded projects listed in Table 2-2, Regulated Projects must incorporate the stormwater controls listed below:

- Site design measures;
- Source control measures;
- Stormwater treatment measures; and

⁹ Caltrans has its own statewide stormwater NPDES permit, but when a Caltrans project is located in the right-of-way of a municipality covered by the MRP, the project must comply with C.3 requirements.

- Hydromodification management measures, if applicable.

In addition to the thresholds in Section 2.3.1, there are size thresholds for implementing site design measures but not stormwater treatment or hydromodification management measures:

- Small projects that create and/or replace between 2,500 square feet and 5,000 square feet of impervious surface; and
- Detached single-family home projects that create and/or replace between 2,500 square feet and 10,000 square feet of impervious surface.

REDEVELOPMENT PROJECTS

If the project is located on a previously developed site and will **add or replace impervious surface**, then it is considered a redevelopment project and the following special provisions apply to it:

- **“50 Percent Rule:”** Projects that replace or alter less than 50 percent of the existing impervious surface need to treat stormwater runoff only from the portion of the site that is redeveloped. Projects that replace or alter 50 percent or more of the existing impervious surface are required to treat runoff from the entire site. Calculations of the altered portion should include portions of the public right of way that are altered as part of the redevelopment project.
- A project that does not increase the total amount of impervious surface over the pre-project condition is not required to meet hydromodification management (HM) requirements.

Large detached single-family homes and road widening projects are also subject to the 50 percent rule.

SINGLE-FAMILY HOME PROJECTS

Large single-family home projects are regulated when the following conditions are applicable:

- The construction of the detached single-family home is a stand-alone project that is not part of a larger, common plan of development. Typically, a larger common plan of development has shared infrastructure, such as utilities, and contiguous parcels, but the final determination will be made by the jurisdiction approving the project.
- The project replaces and/or creates 10,000 square feet or more of impervious surface.

Site design measures can be utilized effectively to reduce the impervious surfaces that are created and/or replaced or that require treatment.

ROAD RECONSTRUCTION PROJECTS

Road reconstruction projects that create and/or replace 1 contiguous acre or more of impervious surface and that are public road projects and/or fall under the building and planning authority of a permittee (including sidewalks and bicycle lanes that are built or rebuilt as part of the existing streets or roads) are required to comply with Provision C.3, including the “50 percent rule” for stormwater treatment (see above).

Additionally, the following road maintenance practices are also considered Regulated Projects under the Road Reconstruction category, if they trigger the 1 contiguous acre threshold.

- Removing and replacing an asphalt or concrete pavement to the top of the base course or lower, or repairing the pavement base (including repair of the pavement base in preparation for bituminous surface treatment, such as chip seal);
- Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders; and
- Resurfacing by upgrading from dirt to gravel, to a bituminous surface treatment (e.g., chip seal) to asphalt, or to concrete; or upgrading from gravel to a bituminous surface treatment, to asphalt, or to concrete.

The Road Reconstruction Project category also includes utility trenching projects which are greater than or equal to 8 feet wide, on average, over the entire length of the project and replace 1 contiguous acre or more of impervious surface.

ALTERNATIVE COMPLIANCE

The MRP allows projects to use “alternative compliance,” to meet stormwater treatment requirements offsite or through in-lieu fee programs. See Chapter 9 for more information.

HOW DO PROJECTS MEET THE C.3 REQUIREMENTS?

Permit application submittals must include detailed information showing how the Provision C.3 stormwater requirements will be met. Chapter 3 provides step-by-step instructions for incorporating C.3 stormwater submittals into your permit application.

2.3.3 Special Projects

The MRP recognizes that certain urban infill, high density, or affordable housing development projects have inherent environmental benefits; that is, construction of such projects can either reduce existing impervious surfaces or create less “accessory” impervious areas and automobile-related pollutant impacts. There are three categories of qualifying projects, known as “Special Projects”, that may receive LID treatment reduction credits. This means that these projects are allowed to use specific types of non-LID treatment measures (tree well filters and media filters) to treat a certain percentage of the site’s runoff, if the use of LID treatment is first evaluated and then determined to be infeasible.

Prior to granting any LID Treatment Reduction Credits, the municipal agency must first determine the infeasibility of treating 100% of the amount of runoff specified in Provision C.3.d with LID treatment. Project applicants must provide a detailed description of the technical evaluation demonstrating why it is infeasible to treat runoff with LID, on- or off-site, with their project submittal. If LID is deemed to be feasible, then it must be implemented as the method of treatment for the C.3.d amount of runoff.

The three categories of Special Projects are:

- Category A: Small Infill Projects ($\leq \frac{1}{2}$ acre of impervious surface)
- Category B: Larger Infill Projects (≤ 2 acres of impervious surface)
- Category C: Affordable Housing Projects

A Regulated Project that meets the criteria for one of the categories may apply the LID treatment reduction credits according to the project’s density, floor area ratio, location relative to an existing

or planned transit hub or priority development area (PDA), minimized surface parking, and/or rent/mortgage rates of dwelling units. (The project may not apply the credits for more than one of the three categories.) The criteria and LID treatment reduction credits for each category are described in Appendix J.

2.3.4 Site Design Requirements for Small Projects

Certain small projects must meet site design requirements in Provision C.3.i of the MRP. This applies to:

- Projects that create and/or replace between 2,500 and 5,000 square feet of impervious surface; and
- Individual single-family home projects that create and/or replace between 2,500 and 10,000 square feet of impervious surface.

Applicable projects must implement at least one of the following site design measures:

- Direct roof runoff into cisterns or rain barrels for use.
- Direct roof runoff onto vegetated areas.
- Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
- Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
- Construct sidewalks, walkways, and/or patios with permeable surfaces.
- Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.

Appendix K provides guidance to assist in selecting and implementing appropriate site design measures for small projects. Included in Appendix K are four fact sheets that provide detailed information for implementing the six site design measures.